

Institutional promotion of research in Humanities and Social Sciences in Spain: *SINC* news agency of the *Spanish Science and Technology Foundation-FECYT*

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Abstract. For a few decades now, the general finding of the decline in “humanistic” areas of knowledge in most countries has been recurrent, while guided teaching and research around disciplines understood as more “scientific”—particularly those grouped in the STEM area and those related to Health and Biomedicine—have become increasingly popular. The widespread perception of the low utility and social application of humanistic knowledge, as well as its lack of scientific rigor, is not only common among citizens but also very prevalent among the research community, especially in the design of institutional policies for the social promotion of knowledge and scientific culture. In this study, we analyze the communicative strategy of research promotion at the *SINC* news agency, as a sample of the institutional policies that are promoted by Spanish public institutions in relation to the Humanities and Social Sciences areas. To this end, we use a methodological strategy that combines the quantitative and qualitative analysis of the contents understood as “humanistic” published in *SINC* and compare it with a sample of those perceived as more “scientific”. The results of the analysis confirm the low institutional interest in the promotion of “humanistic” knowledge by the *SINC* news agency of the Spanish Science and Technology Foundation (FECYT).

Keywords: scientific culture; science communication; scientific journalism; science; humanities; social sciences; scientific policy; research; universities; institutional communication

[es] La promoción institucional de la investigación en Humanidades y Ciencias Sociales en España. La agencia de noticias *SINC* de la *Fundación Española de Ciencia y Tecnología-FECYT*

Resumen. Desde hace décadas es recurrente la constatación generalizada del declive de las áreas de conocimiento “humanísticas” en la mayoría de los países, al tiempo que se tiende más a orientar la enseñanza y la investigación en torno a disciplinas entendidas como más “científicas”, especialmente las agrupadas en el área STEM, y las relacionadas con la Salud y la Biomedicina. La percepción generalizada de la escasa utilidad y aplicación social del conocimiento humanístico, así como su falta de rigor científico, no sólo es común entre la ciudadanía si no también es muy persistente entre la propia comunidad investigadora y, especialmente, en el diseño de las políticas institucionales para la promoción social del conocimiento y la cultura científica. En esta investigación, analizamos la estrategia comunicativa de promoción de la investigación de la agencia de noticias *SINC*, como muestra de las políticas institucionales que se promueven desde las instituciones públicas españolas, en relación al conocimiento propio de las áreas de Humanidades y Ciencias Sociales. Para ello, utilizamos una estrategia metodológica que combina el análisis cuantitativo y cualitativo de los contenidos entendidos como “humanísticos” publicados en *SINC* y lo comparamos con una muestra de los percibidos como más “científicos”. Los resultados del análisis confirman el escaso interés institucional en la promoción del conocimiento “humanístico” desde la agencia de noticias *SINC* de la Fundación Española de Ciencia y Tecnología (FECYT).

Palabras clave: cultura científica; comunicación de la ciencia; periodismo científico; ciencia; humanidades; ciencias sociales; política científica; investigación; universidades; comunicación institucional

Sumario. 1. The decline of Humanities and Social Sciences. 2. Delimitation of the object of study and working hypothesis. 3. Research methodology. 4. Results of the investigation. 4.1. Interpretive frameworks. 5. Conclusions. 6. Bibliography.

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1. Introduction

The subsidiary value attributed to Humanities in today’s societies is related to the contemporary institutional interest in promoting applied knowledge derived from research carried out in STEM (Science, Technology, Engineering & Mathematics). Currently, applied knowledge

and research are intensely encouraged, especially since the famous report by Vannevar Bush in the immediate post-war context of World War II (Bush, 1945). In the last decade, the gap separating “humanities” from the rest of the “sciences” that has shaped two radically different and confronting cultures has been widening, as Snow denounced in early 1959 (Snow, 2000).

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This is despite the multidisciplinary alternative represented by the promotion of an area of research that grouped studies in Science, Technology, and Society (STS), after the presentation of the Club of Rome Report in 1962 on *The Limits of Growth*. In STS studies, Humanities and Social Sciences play a central role; nevertheless, they do not stand strong as a multidisciplinary counterpart to the persistent fragmentation of knowledge in different disciplines, which seem increasingly distant from each other. The social consequences of the close interrelation of institutional policies based on the current economic system, (Quintanilla, 2015; Rodríguez-Serrano and Gil-Soldevilla, 2018; Van Dijck, 2003), also known as “MIT ideology,” (Morozov, 2013) are being increasingly criticized.

In this sense, various forms of philosophical neo-positivism persist in research practices and in the generation and promotion of knowledge, especially in relation to the so-called “sciences.” As recent studies demonstrate, for researchers, the communication of knowledge continues to be perceived as a strategy to minimize social resistance to scientific-technical progress (Pestre, 2008), and to restore confidence in science among citizens (Besley et al., 2018). Furthermore, it has been criticized that “scientific” knowledge is simplified for its dissemination with the sole purpose of expanding and guaranteeing new forms and financial resources for research, which, nowadays, is generally perceived in relation to its “social utility” as, for example, promoting new funding strategies such as crowdfunding (Schäfer et al., 2016), a strategy of knowledge simplification that is often not adequate for humanistic areas.

In the same way, the increasing improvement of control by all parties involved in the scientific system, mostly as a result of the growing epidemic of falsifications in research, promotes the restoration of the supposed truth provided by science (Gustafson and Rice, 2019; Landström et al., 2015; xxx, 2019), contrary to what happens in Humanities, as if the knowledge provided were more unscientific, or even false. However, the progressive commercialization of knowledge and the undisguised promotion of neoliberalism in the scientific and political systems of many countries (Davidson-Harden, 2013)—and the increasingly frequent detection of falsifications as a result of highly competitive research for funds—does not imply that the individual ideology of the researcher or scientific community is not honest.

In any case, it is clear that it is necessary to address the current complexity of science policies, and even the very notion of “science”, from a much more multidisciplinary perspective, in which the Humanities and Social Sciences have much more to contribute.

1.1. The decline of Humanities and Social Sciences

The historical roots of the progressive decline of humanistic knowledge since the beginning of the industrial revolution have been examined in previous studies (Rivero-Franyutti, 2013), especially in relation to the extensive imposition of empirical research methods by the Baconian proposals and the controversial particularity

of a polysemic term combining the humanistic areas of knowledge (Olmos-Peña et al., 2015). Likewise, the incoherence and fragmentation of research in the humanistic areas have been vehemently criticized. This is not limited to the supposed intellectual imposture on which some works are based and their little or no scientific validity (Sokal and Bricmont, 1999). More recently, and in a controversial way, the growing orientation of research towards the political activism in diverse sectors has also been criticized, especially regarding Humanities and Social Sciences in the “publications of the complaint” by the *Grievance Studies Project* (Lindsay et al., 2018).

Nevertheless, beyond these frontal attacks, and certainly not without reason, the common perception of a lack of “scientificity” in the areas of knowledge integrated especially by Humanities and their low social value seems widespread (Knudsen, 2017). Recent specific studies on the value granted by the citizens to the Social Sciences show the generalized perception of their limited usefulness as part of the journalistic discourse (Huber et al., 2019). Even in countries like Japan, Humanities and Social Sciences are being eliminated from university studies (Grove, 2015), even though our academic environment has not gone as far and the historical claims promoted in these areas of study from European institutions have persisted (Griffin, 2007).

However, recent reports in this regard are disappointing (Bueno et al., 2019). The specificity of humanities in the difference among research methods and practices, and their discursive character with respect to the considered sciences, continues to be highlighted, without implying that their results are not valid or socially useful. It is common to continue classifying studies in the area, especially Humanities and Social Sciences, as unscientific and of little value or social utility than other sciences. This is particularly true in relation to studies integrated into the STEM group, and those related to the areas of Biomedicine and Health Sciences.

In this regard, and in the specific case of Spain, the institutional drift and deterioration of teaching programs in the humanistic training of future citizens is also notorious, as has been reflected in the various educational reforms promoted since the democratic transition (Ruiz Torres, 1998; Llorens, 2020), and the situation has not improved with the current LOMLOE (Efe, 2021). Moreover, the low employability of university graduates continues to be a serious problem, and the Arts, Humanities and Law present the lowest labor market insertion among university graduates. However, in any case, the unemployment rate of workers with higher education in Spain continues to be extraordinarily high, at 8.4%, the double of workers with the same level of training in the OECD and the EU, which is 3.9% (Hernández Armenteros and Pérez García, 2020). Furthermore, it has not been easy for evaluation agencies of university staff to establish criteria to improve the humanities areas and to promote the quality of teaching and research in our universities, although efforts are being made in this regard (Giménez Toledo, 2018). In any case, it is quite paradoxical that the necessity of humanistic training of future citizens from the first stages of education up to University

continues being questioned in a generalized way, taking into account that the European Union has assigned to, for example, ethics a central role in its scientific research and technological innovation policy since the Horizon 2020 program, and all techno-scientific research and innovations must include a critical analysis of their ethical, social and environmental implications (Rodríguez Guillén, 2021). Just as it happens, for example, in the field of training in communication skills (Marzal Felici, Rodríguez Serrano and Gil Soldevilla, 2018), although the continuous questioning of its evident formative utility can be extended to virtually any field of Social Sciences, and especially to the Humanities.

In addition, the social impact of the Humanities and Social Sciences is difficult to determine, since their benefits are not usually immediate. Humanistic knowledge is not found in specific sections of the media—unlike scientific knowledge, which is easily identifiable—making it very difficult to determine its presence in the public space and social discourse.

Furthermore, research in this regard is very scarce. The only two research works that have been conducted on the presence of Humanities and Social Sciences in the media, based on the pioneering meta-analysis (Schäfer, 2012), present very diverging data that vary from figures indicating a presence of less than 30% to more than 60% of humanistic disciplines, depending on the criterion adopted (Šuljok and Vuković, 2013; Summ and Volpers, 2016; Vestergård and Nielsen, 2016). In a macro-study conducted more than a decade ago on a group of 13 countries (Bentley and Kyvik, 2011), excluding Spain, all knowledge areas were considered. The results indicated that scientists from Hong Kong disseminated research activity the most, followed by those from Germany. The data showed a significantly greater presence and generalized dissemination productivity in researchers in humanities compared with those in

science. However, the difficulty in identifying these areas is so high that in another recent automated macro-study on scientific news in the Spanish press, analyses related to Humanities and Social Sciences were consciously excluded, strictly limiting it to the analysis of “pure sciences, biology and medicine” (Groves et al., 2016: 693).

Given the difficulties in delimiting the specific humanistic contents that appear in the media—and with the aim of contributing to the determination of the social value of Humanities and Social Sciences—in this study, we analyze the dissemination of research results in these areas from an institutional perspective—that is, from the public administration. To this purpose, we have analyzed the contents disseminated by the *SINC* news agency, which is part of the *Spanish Foundation for Science and Technology (Fundación Española para la Ciencia y la Tecnología – FECYT)*, which until recently depended on the *Ministry of Science, Innovation and Universities in Spain*²

2. Delimitation of the object of study and working hypothesis

This work has originated from an obvious contradiction that was found after a brief analysis of some of the institutional instruments that the Spanish administration created (in the last decade) to promote the generation of knowledge, evaluate the productivity of the research community and promote scientific culture among its citizens.

A quick analysis of the first of these institutional tools, the “six-years terms of research” of the group of PDIs of the Universities (Ministry of Education. General Secretariat of Universities, 2019), clearly shows significant differences in research productivity by area of knowledge (Figure 1).

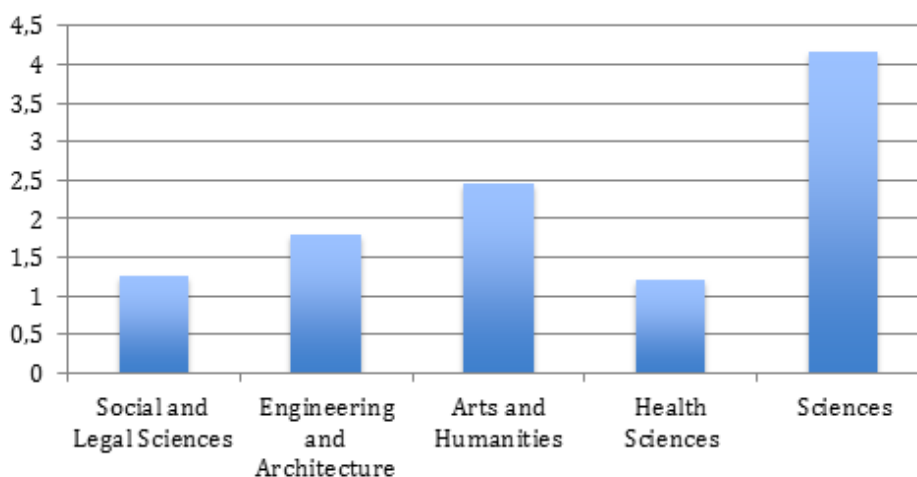


Figure 1. Productivity by area of knowledge.

In the second tool created by the administration, which is highly contradictory to us in view of the data it presents in relation to the PDI group and their research productivity, such as the one produced each year by the *Spanish Foundation for Science and*

² At the time of writing, in January 2020, and as a result of the ministerial restructuring after the formation of the new government, this ministry has been divided into two, one for Science and Innovation and the other for Universities.

Technology (FECYT, 2018), the treatment given to humanities in comparison with sciences is confusing, such as the official report published on the social perception of science among citizens.

First of all, this report is entitled *Social Perception of Science and Technology*, so we could assume a priori that citizens understand that the term “science” includes the Humanities and Social Sciences. This, however, would be very risky. After analyzing the content, we do not find any explicit reference to what is considered “science”, and what the authors assume that citizens might understand about what “science” means. Furthermore, the report does not include an explanation nor does it include any knowledge category grouped under “technology”.

Either good or bad, the report does nothing more than follow the general trend in all countries, prioritizing the promotion of STEM areas, a well-established field in Europe for decades (Pardo and Calvo, 2002) where the “Eurobarometers” began to be developed. However, the confusion and contradiction produced by this report increased when we saw how the citizens were asked to rate some topics of interest. For the authors of the report, (i.e., the administration), it seems that education, cinema, work and employment, and politics are social concerns different from those related to “science” and “technology,” as if there was no research and studies in pedagogy, film analysis, sociology of labour or political science. When the report is analyzed in greater detail, only a specific relationship was established between “science” and “health” (FECYT, 2018: 259), in line with the generalization of the therapeutic discourse associated with therapeutic culture (Illouz, 2008) and closely related to the previously mentioned “MIT ideology.” Additionally, in the same vein, *FECYT* is extremely interested in determining the perceived social utility of science and technology. In our opinion, this is one of the ultimate objectives of the report: Around 60% of the people interviewed agreed with: Science and technology solving problems, but also creating them (63.9%); Science and technology serving, above all, to solve problems (61.0%); Science and technology being the highest expression of prosperity in our society (58.8%) (FECYT, 2018: 107).

Thus, the question we ask ourselves is: what is the position of the scientific knowledge in the areas of Humanities and Social Sciences, as shown in this report? Is it that Humanities and Social Sciences do not solve problems, but instead create them? Do they not contribute to the prosperity of our society?

We are not saying that promoting scientific vocations and STEM disciplines among citizens is not necessary. Quite the contrary. However, in the first approach, we have only verified the following: because of this new ideology of progress and innovation, Humanities and Social Sciences seem far from institutional interests, and will remain so as long as they aren’t fully considered as “sciences.” Public institutions are undoubtedly interested in social issues and those affecting people’s lives. However, it is un-

reasonable that the administration does not consider Humanities and Social Sciences necessary to understand the social perception of the scientific knowledge resulting from the activity of 45% of the university teaching staff belonging to these areas, and that they do not even value their work as scientific.

This paradox in the administration’s attitude towards university activity and scientific research leads us to our initial research question.

RQ: What is the relevance of the knowledge generated from universities in the areas of Humanities and Social Sciences from the perspective of the administration?

And to our initial working hypothesis:

H1: The FECYT-SINC news agency mainly promotes the public dissemination of STEM lines of research.

SINC news agency

The *SINC* news agency was created in 2008 with the main function of collecting and disseminating knowledge from a journalistic point of view, preferably in the form of “informative” content. The agency would, therefore, contribute toward the promotion of scientific culture, both directly to the citizens from its own digital platform, and by providing content and informational resources on social media. The data resulting from this first analysis of the contents distributed by *SINC* since its creation indicate that they are structured by thematic areas, as shown in Figure 2.

We can observe two significant aspects of the *SINC-FECYT* institutional communication policy, as a reference for the ministerial activity in the social promotion of knowledge in Spain. First, *ad hoc* classification categories have been created that go beyond the areas of knowledge established by the administration to evaluate scientific activity. However, this is neither better nor worse, and far from being uncriticized, since any specialist in library science and documentation or in any area of “humanities” knows the difficulties in establishing concepts and closed terminologies in the elaboration of the thesauri and in classifications. Second, following the general trend in the dissemination of scientific knowledge, the published content in the areas of Humanities and Social Sciences is significantly lower than those in the areas of Biomedicine and Health, and Natural Sciences. They are also lower than Mathematics, Physics and Chemistry. The content in Innovation is practically testimonial.

With the data obtained after this initial analysis of the contradictions, we can estimate the institutional care ratio of each of the large areas of knowledge. However, as we already stated, the different forms of classification by area within the administration only allow an approximate assessment of some of the areas that we consider of interest for our investigation (Table 1).

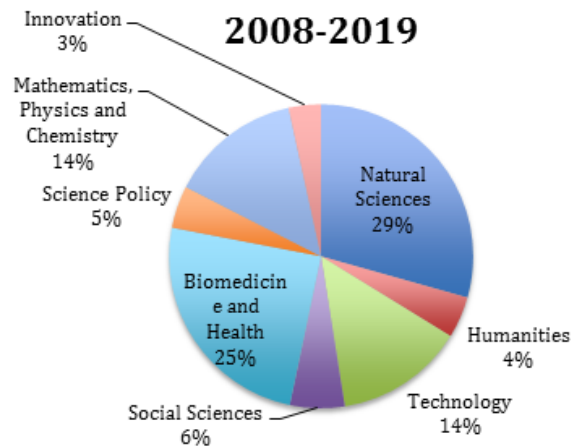


Figure 2. Content distribution by disciplines in SINC.

Table 1. Institutional popularization ratio in SINC.

News	Humanities	Social Sciences	Science	Biomedicine and Health
Until 9/01/2020	1756	2312	17248	9821
Researchers	11.627	31.706	14.229	18.949
Six-year terms	28.522	40.082	59.130	23.078
Productivity (p)	2.45	1.26	4.15	1,21
Popularization Ratios				
Per PDI	0.15	0.07	1.21	0.51
Per Six-year terms	0.06	0.05	0.29	0.42
Institutional Popularization (ip)	0.71	1.82	4.15	8.06

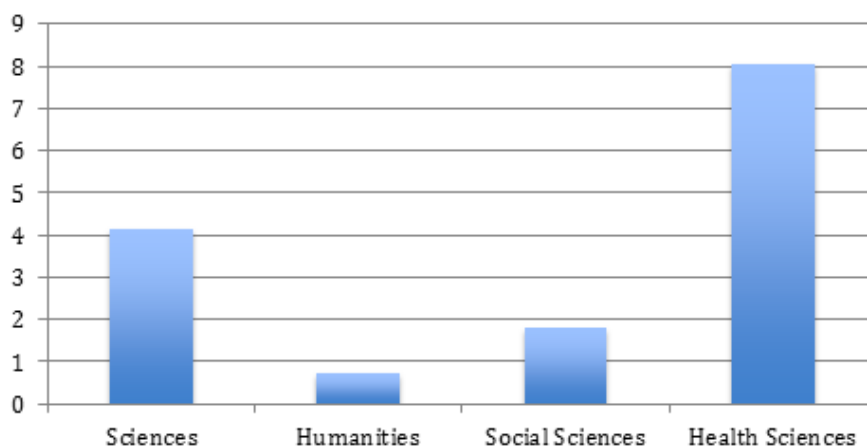


Figure 3. Popularization index by area of knowledge.

After calculating the Popularization Index (Table 1, Figure 3) ($ip = \text{News/Productivity}$, base 100), the significant differences in treatment received by the knowledge generated in the areas of Humanities ($ip = 0.71$) and Social Sciences ($ip = 1.82$) were evidenced and compared with Biomedicine and Health ($ip = 8.06$) and Sciences ($ip = 4.15$). In this category, we included those classified by *SINC* in the category of Natural Sciences, and Mathematics, Physics and Chemistry.

This result is not surprising since most of the studies in this regard—with the differences expressed according to the methodology used—follow the general tendency in all countries towards promoting “scientific” areas of knowledge on social media, and the results of the previously mentioned analysis of the press in Spain (Groves et al., 2016: 699) show that 32% of the total articles correspond to the areas of Biomedicine (19%) and Public Health (13%).

Based on this, at least from the quantitative point of view, we can draw the first conclusion: research in the Humanities area ($p = 2.45$; $ip = 0.71$) does not receive adequate attention and is not promoted by the *SINC*. On the other hand, research in Social Sciences is given a certain priority by the agency for public dissemination, which is slightly above the research productivity of the area ($p = 1.25$, $ip = 1.82$).

After verifying the initial contradictions and partially responding to the hypothesis raised from these preliminary data, in this research work, we carried out a detailed study of the Humanities and Social Sciences content classified in *SINC*. Complementary hypotheses to the main one (H1) in this research are then proposed:

H1a – *SINC* “institutionally” prioritizes the contents that allow resolving conflicts and facilitating progress.

H1b – The institutional treatment of the contents (H1a) prioritizes investigations that show results based on the concept of “scientific truth” and “objective data,” avoiding the inherent uncertainty in any representation of knowledge (xxx, 2019)

Finally, as a conclusive hypothesis resulting from the previous ones, we propose that:

H2 – *SINC-FECYT* establishes a discursive strategy that promotes a model of scientific culture framed in neo-positivist ideological currents that is based on techno-scientific progress.

3. Research methodology

To validate our working hypotheses, we used a content analysis methodology based on linguistic pragmatics and the Speech Act theory, proposed by Austin and completed by Searle, which affect the performative character of language (Searle, 1969). From this theoretical perspective, we used the Frame Analysis methodology (Goffman, 1974) for our analysis, understanding that the framing process “essentially involves selection and salience” (Entman, 1993: 52).

To carry out our analysis, we adopted the proposals of Tankard (2001: 101), in relation to the different mechanisms used to identify the framing strategy of the informative content; we specifically analyzed titles, subtitles and leads. Likewise, we assumed the Gamson and Modigliani (1989) differentiation of framing devices to identify condensed information in relation to a certain topic in the form of metaphors, examples, phrases and keywords, and descriptions. Based on these proposals, we carried out an analysis strictly limited to written information. The analysis of visual content would require a specific investigation that is outside the scope of this study.

We used a deductive-inductive strategy from the down-up methodological perspective proposed by the Grounded Theory (Glaser and Strauss, 1967)

to determine the interpretive frames, which directly extracts the significant terms and phrases. From this, in accordance with the Frame Theory proposals, we grouped them into the categories proposed in the study’s hypotheses.

To this end, first, by means of a deductive strategy, we established the contents in the disciplines under analysis. Second, we classified them inductively according to their “institutional newsworthiness” (H1a) from the ideological perspective of their usefulness for the “resolution” of “conflicts” and contributing to “progress” and in relation to their “scientificity” (H1b). This would be determined by the use of empirical methodology, often with the explicit “datafication” (Latour, 2010) of the informative contents and avoiding showing “uncertainty” in the research results.

Taking this methodological perspective as the main object of study and as a starting point, we defined the content of the headlines of the textually informative content published by the *SINC* agency over the last two years (2018-2019) classified into the Humanities ($N = 81$) and Social Sciences ($N = 156$) labels. Complementary, we also analyzed the disciplines corresponding to the most popular contents in all areas of knowledge among readers during 2015-2019 period.

To improve the precision of the study, we divided the research into two phases and selected a sample of Science content for comparison during the 2018-2019 period, and over a period of five years (2015-2019), as detailed below.

In the first phase of the research, we analyzed the disciplines corresponding to the most popular content among the readers of the *SINC* portal during the last five years (2015-2019). We compared them with a random sample of all those classified in the areas of Humanities ($N = 245$, $n = 24$) and Social Sciences ($N = 506$, $n = 51$) throughout the same five-year period.

In the second phase, we carried out an analysis of the different devices used for framing the contents classified in the areas of Humanities and Social Sciences published between 2018-2019. Next, we compared them with a random sample of those published and classified during the same period in Natural Sciences ($N = 925$, $n = 93$)—which has a large presence in *SINC* (29% of the total published materials since its inception)—and in the area of Mathematics, Physics and Chemistry ($N = 413$, $n = 42$), due to the common perception of its unambiguous definition of “science,” and whose absolute presence in *SINC* publications since its inception is 14%.

For comparative and complementary purposes, we compiled a random sample of Humanities and Social Sciences content from a total of 75 publications corresponding to the period 2015-2019 ($N = 751$, $n = 75$, confidence level = 95%, margin of error and = 6.4% for $pq = 0.9$ and $e = 9.3\%$ for $pq = 0.75$); and 135 publications on Natural Sciences and Mathematics,

Physics and Chemistry corresponding to the period 2018-2019 (N = 1338, n = 135, confidence level = 95%, margin of error e = 4.8% for pq = 0.9 and e = 6.9% for pq = 0.75).

This analysis methodology allowed us to identify and classify the differences and similarities in each of the areas of knowledge under study and their specific framing strategies. In this manner, we respond to the research hypotheses raised in relation to *SINC*'s treatment of research in Human and Social Sciences (H1a), their relationship with the predominant scientific trend (H1b), and the scientific culture model promoted by the Spanish public administration through *SINC-FÉCYT* (H2).

4. Results of the investigation.

It can be observed that the production of classified content has decreased in the same five-year period analyzed in all areas, even though this decrease is especially significant in Innovation (-74.6%) and Scientific Policy (-64.4%); it is less pronounced in Technology (-2.1%) and Biomedicine and Health (-44.8%). Natural Sciences (-51.7%) and Mathematics, Physics, and Chemistry (-54.9%) were reduced by around half, and their already scarce presence compared to the rest of Human Sciences (-61%) and Social Sciences (-62.5%) becomes much more pronounced (Figure 4).

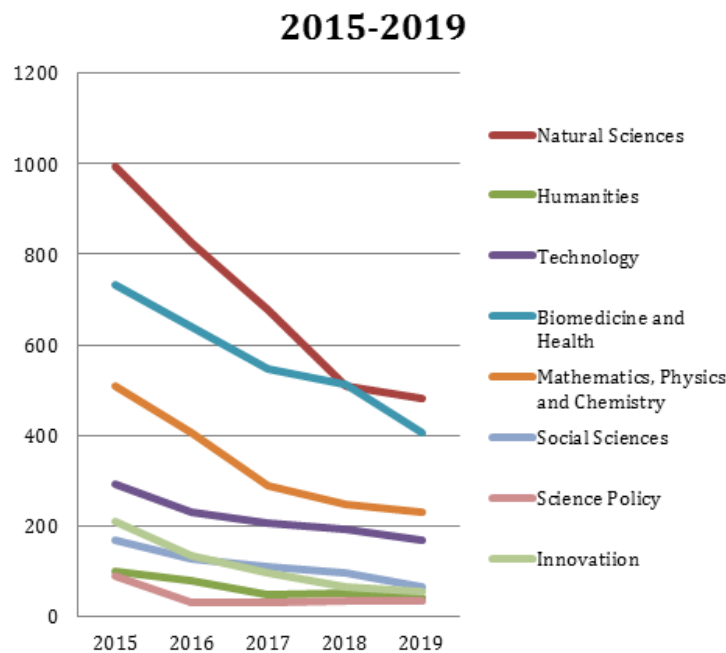
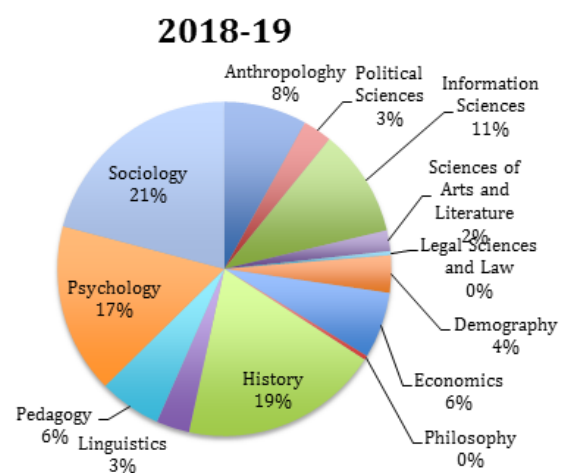
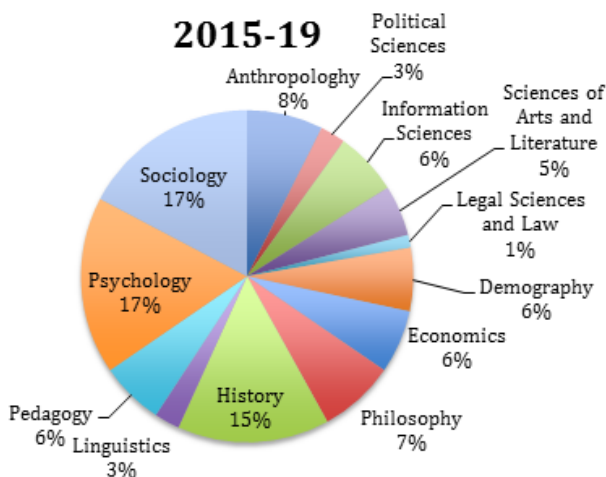


Figure 4. Evolution of contents by *SINC* area (2015-2019).

In a more specific comparative analysis by discipline, we observe that the presence of Sociology, Psychology and History is predominant compared to the rest of the areas. The most significant aspect,

however, is the disappearance of Philosophy, which went from representing 7.4% in the 2015-2019 period, to only having a presence of 0.42% in the 2018-2019 period (Figure 5 and 6).



Figures 5 and 6. *SINC* Content distribution by area (2015-2019 and 2018-2019).

The comparative analysis of the contents in the different disciplines belonging to the “scientific” and “humanistic” areas present in *SINC*, over the last two years, confirms the significant attention that some of

them receive. In science, Physics and Life Sciences stand out more prominently than any other discipline, and in Humanities, Sociology, History and Psychology are more prominent (Figure 7).

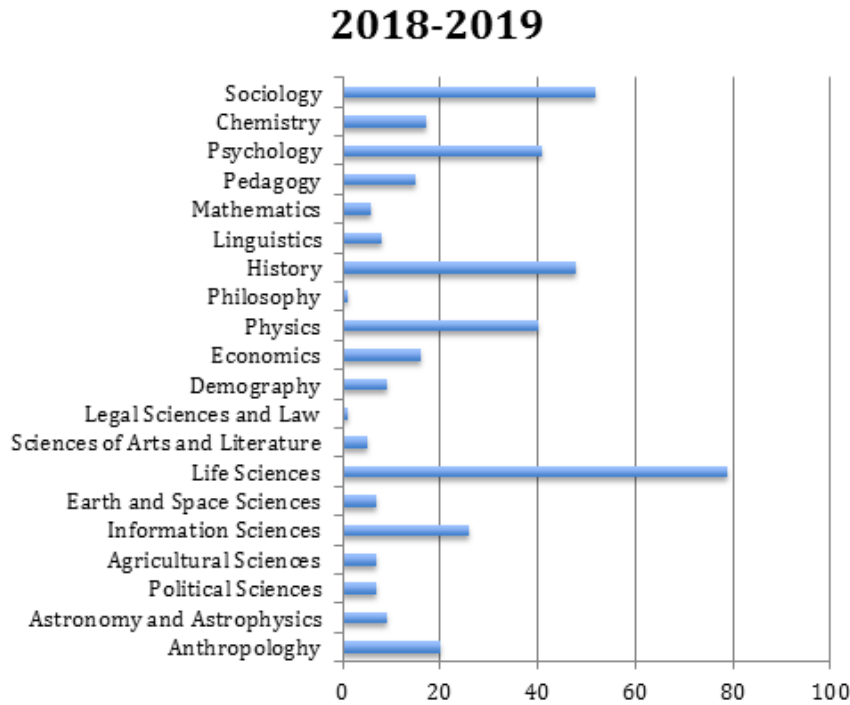


Figure 7. Content distribution by *SINC* discipline (2018-2019).

Regarding the interest that different content aroused among readers in the five-year period analyzed, the most popular disciplines were those integrated in Health and Biomedicine (44.64%), followed by Natural Sciences (32.14%), Mathematics, Physics and Chemistry (10.71%), and Social Scienc-

es (10.71%). Humanities (1.78%) arouse little interest, and in the period, there is only one article among the most read, specifically a 2015 interview with the philosopher of science Daniel Dennett, wherein he questions the usefulness of religion for moral progress (Jar, 2015) (Figure 8).

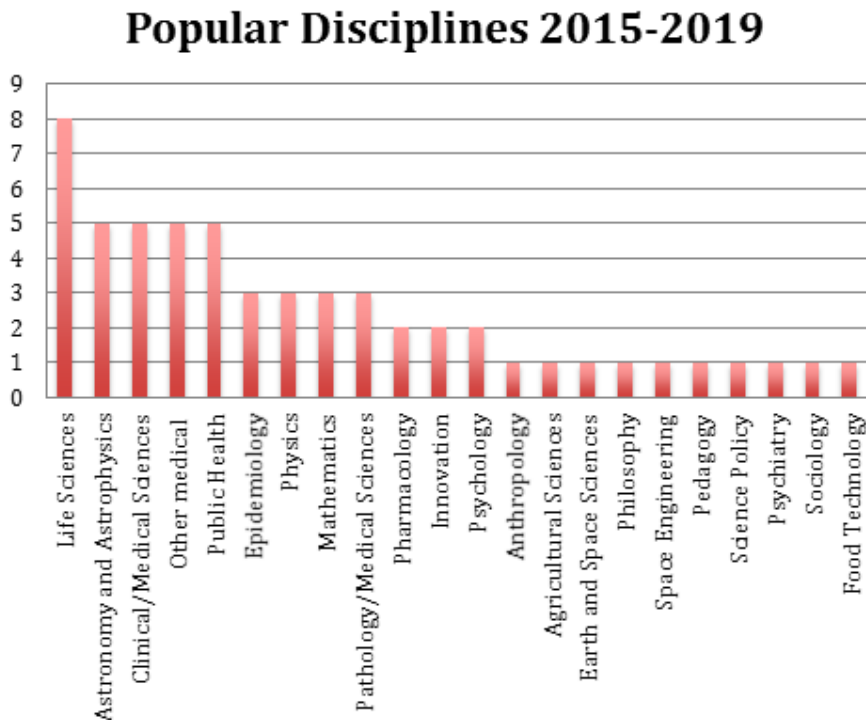


Figure 8. Most popular disciplines among *SINC* readers (2015-2019).

If we return to the initial data, we can observe that research in the areas of Biomedicine and Health is much more interesting from an institutional point of view ($ip = 8.06$) and for the readers ($il = 20.52$) than any other, despite its low productivity ($p = 1.21$) with

respect to, for example, scientific research ($p = 4.15$; $ip = 4.15$; $il = 5.7$). On the contrary, Humanities are of very little interest to the institution ($ip = 0.71$) and to the readers ($il = 0.40$), despite their high research productivity ($p = 2.45$) (Table 2).

Table 2. Ratios of popularization, reader interest, and institutional effectiveness.

	Humanities	Social Sciences	Sciences	Biomedicine and Health
Number of popular news articles 2015-19	1	6	24	25
PDI Productivity (p)	2.45	1.26	4.15	1.21
Institutional Popularization (ip)	0.71	1.82	4.15	8.06
Reader Interest/Productivity (ir)	0.40	4.74	5.77	20.52
Institutional Effectiveness (ie=ir/ip)	0.56	2.59	1.39	2.54

The communication strategy in the promotion of certain areas was very effective in the case of Social Sciences ($ie = 2.59$) and in Biomedicine and Health ($ie = 2.54$). It is still optimal in Sciences ($ie = 1.39$), while in Humanities, it is well below par ($ie = 0.56$).

4.1 Interpretive frameworks

Regarding the results of the comparative analysis of the interpretive frameworks with which the contents in Humanities and Social Sciences are presented to the readers in the five-year period sample, some interesting results can be observed, as shown in Table 3.

Table 3. Humanities and Social Sciences interpretive frameworks (2015-2019).

	2015-2019 % of the total	Social Sciences	Humanities
H1a	Conflict	33.33	4.16
	Resolution	23.52	12.50
	Progressiveness	11.76	12.50
H1b	Datafication	29.41	20.83
	Certainty	23.52	58.33

First, from the point of view of their “institutional newsworthiness” (H1a), the contents are selected based on their “conflictivity” to a greater extent in Social Sciences (33.33%) than in Humanities (4.16%), as well as in relation to their ability to provide “solutions” (23.52% and 12.50%, respectively).

Although both areas of study marginally contribute to “progress” (11.76% and 12.50% of the contents of the period in each discipline, respectively), in Social Sciences, a more “scientific” framework of interpretation (H1b) based on “data” (29.41%) is provided. Explicitly, in the content of both disciplines, an attempt is made to provide different degrees of “certainty,” with more interest in Humanities (58.33%). Nevertheless, in Social Sciences, expressions related to the results, such

as “relevant and reliable,” “put in evidence,” “contrasted truths,” and “scientific evidence” are used. However, in Humanities, researchers are more cautious with the objectivity of their conclusions and expressions, such as “it is pointed out,” “it contributes to the knowledge,” “some unknowns have been resolved” and even “you will end up with more doubts” are used.

In the more specific and comparative analysis of the total number of articles published in Humanities and Social Sciences with a sample of those understood as “science” corresponding to the last two years (2018-2019), the results can be qualified, and the specific interpretation framework proposed by *SINC* for the Humanities and Social Sciences can be established with more precision (Table 4).

Table 4. Compared interpretive frameworks (2018-2019).

	2018-2019 % of the total	Social Sciences	Humanities	Natural Sciences	Mathematics, Physics and Chemistry
H1a	Conflict	21.51	15.51	28.20	12.5
	Resolution	33.33	5.17	12.65	50
	Progressiveness	9.49	12.50	8.62	40.62
H1b	Datafication	34.61	41.37	39.74	34.73
	Certainty	18.98	18.98	15.51	12.50
	Uncertainty	10.12	25.86	25.64	34.37

As can be seen, the contents of the Natural Sciences areas are mostly presented to the readers from the perspective of their “institutional newsworthiness” (H1a) based on their “conflictivity” (28.20%), which in this case is related to ecological issues (climate change, conservationism) such as “floods caused by climate change,” “the extinction of brown bears” or the spread of “pests.” Conflicts in Social Sciences (21.5%) refer to economic and social inequalities: the “labor market,” “evictions” or “immigration” or “political corruption.” In Humanities, they refer to ideological issues such as “the rise of the right wing,” or to gender such as the “sexualization of sports” (15.51%). The contents of “gender” are significant in both areas, especially in Social Sciences, where they represent 24.68% of the total.

In relation to the “resolution” capacity of the research carried out in each area, more solutions are provided in Mathematics, Physics and Chemistry contents (50%). The solutions are usually of a technological nature such as “increasing brightness and duration of OLED lamps” and, although they sometimes have applications in other areas, such as “continuously releasing a drug” or “the use of air as an inexpensive and environmentally friendly antioxi-

dant,” they are preferably intended for the advancement of research. Thus, in this area, “progressiveness” (40.62%) is understood as a scientific advance, for example to “allow viewing and downloading astronomical data” or “channeling light.”

In comparative terms, research from the Natural Sciences is shown as more descriptive and less grounded in continuous scientific advance, similar to what occurs in Humanities (12.50%) and Social Sciences (9.49%). Although in Humanities, it is presented in a more abstract way, for example to “inspire,” “innovate” or for its “positive effects,” in Social Sciences, it refers more to its contribution “to improving people’s lives”, “to facilitate the day to day”, and toward “development” and “well-being.”

Regarding the presentation of the *SINC* contents according to their “scientificity” (H1b), similar figures are observed in all areas regarding the institutional interest in showing the results with data that support their “objectivity and scientific truth” in the commented terms of the prevailing neo-positivist ideology currently in research.

However, a more detailed analysis for this two-year period reveals some interesting results in this regard (Table 5).

Table 5. Certainty and datafication comparative ratios (2018-2019).

	2018-2019 % of the total	Social Sciences	Humanities	Natural Sciences	Mathematics, Physics and Chemistry
H1b	Datafication	34.61	41.37	39.74	34.73
	Certainty	18.98	18.98	15.51	12.50
	Uncertainty	10.12	25.86	25.64	34.37
	Ratio C/I	1.86	0.73	0.60	0.36

The contents in Mathematics, Physics and Chemistry ($r = 0.36$) and Natural Sciences ($r = 0.60$) are, paradoxically, the ones that show greater caution in presenting their conclusions as absolute truths, and terms denoting uncertainty such as “would reinforce the hypothesis,” “would indicate,” “appears to be involved,” and “the results suggest” are frequently used. However, the contents in Social Sciences are presented with more determination from *SINC* as “objective” knowledge ($r = 1.86$), with terms such as “there is evidence,” “a direct correlation,” “the experts have found” and the like; and to a much lesser extent, those in Humanities (0.73), wherein terms such as “suggests that,” “it is probable that,” “the data help” are used more frequently, similar to how the contents of the so-called “sciences” are presented.

5. Conclusions

First, as determined in our research in absolute figures, almost 50% of the total PDI assigned to Humanities and the total accumulated six-year research terms are of no interest to the *SINC* readers, a figure that has to be clarified, given that the administration

itself does not promote the content according to the productivity of the group ($ip = 0.71$).

In comparative terms, the results show that *SINC* intensively promotes Biomedicine and Health ($ip = 8.06$) and Sciences ($ip = 4.15$) content. However, the topics that are of greatest interest to readers despite the modest institutional attention they receive ($ip = 1.82$) are in Social Sciences ($ie = 2.59$).

Regarding the presence of content from different areas and the interest of *SINC* in promoting them, the answer to our initial RQ (What is the relevance of knowledge generated from universities in the areas of Humanities and Social Sciences from the perspective of the administration?) is that the *SINC* news agency is far from being interested in promoting the knowledge of Humanities and Social Sciences. And, we can conclude regarding the general hypothesis of this research (H1) that the FECYT-*SINC* news agency mainly promotes the public dissemination of STEM research areas.

In addition, based on the results of our research, we can establish the general interpretative framework (F) that *SINC* institutionally proposes to its readers for the Social Sciences (F-CS), the Humanities (F-H) and for the Social Sciences and Humanities versus the Sciences (F-CS+H/Sciences):

F: The journalistic work must prioritize the contents in Biomedicine and Health, which are also the most popular among readers, and those in “sciences” must be promoted, among which Social Sciences must be included. Their usefulness must be valued because they are popular contents among the readers. Humanities do not require attention because, despite being a very productive area, its results are not so “scientific,” and arouse little interest among the readers.

Based on this, we can establish the preferential interpretation framework that is proposed to readers in the contents of *SINC* from the perspective of “institutional newsworthiness” (H1a) and “scientificity” (H1b) of the research on the areas of Humanities and Social Sciences.

F-CS: The content of Social Sciences is presented by promoting an interpretive reading framework that values their scientificity, and in relation to their degree of conflict and ability to provide solutions with reliable data, while their results contribute to well-being and development.

F-H: The content of Humanities, however, are presented from a less scientific perspective; they deal with less conflictive issues and are of little interest due to their limited capacity to provide solutions, beyond an abstract contribution to progress.

F-CS+H/Sciences: In relation to the so-called sciences, the contents in Social Sciences and Humanities also need to show data to validate their research results. However, *SINC* makes a special effort to pro-

mote the “scientific” status of the contents related to the Social Sciences to equate it with the rest of the “sciences.”

As a result, we can conclude that these interpretative frameworks proposed confirm our secondary hypothesis H1a (*SINC* “institutionally” prioritizes the contents that allow resolving conflicts and facilitating progress); and H1b (The “institutional” treatment of the contents (H1a) prioritizes investigations that show results based on the concept of “scientific truth” and “objective data,” avoiding the inherent uncertainty in any representation of knowledge).

Finally, we can undoubtedly confirm our conclusive hypothesis H2: *SINC-FECYT* has established a discursive strategy that promotes a utilitarian scientific culture model framed in neo-positivist ideological currents that is based on the techno-scientific progress and the social utility of research.

The low value given institutionally to the knowledge generated in the Humanities and Social Sciences, exemplified in this research work on the FE-CY-SINC, has wide and pernicious effects for the current and future system of knowledge generation, for example in terms of research funding. And we hope that this article can contribute and encourage future research work to improve the overall system of production and dissemination of scientific knowledge and, ultimately, to advance the training of future citizens to better meet the complex challenges of our contemporary digital society.

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