Dr. Javier MARZAL-FELICI
Universitat Jaume I. Spain. marzal@uji.es

Dr. Aaron RODRÍGUEZ-SERRANO
Universitat Jaume I. Spain. serrano@uji.es

Dr. María SOLER-CAMPILLO
Universitat Jaume I. Spain. solerm@uji.es

Regulated communication studies in the Shanghai ranking universities. Proposals for an epistemology of communication sciences

Los estudios reglados de comunicación en las universidades del ranking de Shangai. Propuestas para una epistemología de las ciencias de la comunicación

Abstract

This paper proposes a critical reflection on the status and nature of communication studies in the Spanish academic context. First, the situation of communication studies, which the Spanish academic authorities have unequivocally established in the field of "social and legal sciences", more specifically in the field of social sciences, is examined. Secondly, the study of the location of communication studies in the first 40 universities of the Shanghai ranking is addressed. For this, the syllabus (degree and postgraduate) and the structural arrangement of their faculties have been studied both in the field of audiovisual communication and journalism. The results show that, in contrast to common assumptions, our degrees are often much closer to centres that are explicitly linked to "humanities". Similarly, we show that the number of universities that bet on communication is remarkably high (80% of the ranking core). Finally, we discuss the possibility of defining a new epistemology of communication sciences, which accepts its interdisciplinary nature; that is, as a disciplinary space in which humanistic knowledge and social sciences are involved.

Resumen

El presente artículo propone una reflexión crítica sobre el estatuto y naturaleza de los estudios de comunicación en el contexto académico español. En primer lugar, se examina la situación de los estudios de comunicación, que las autoridades académicas españolas han establecido unívocamente en la rama de "ciencias sociales y jurídicas", más concretamente en el ámbito de las ciencias sociales. En segundo lugar, se aborda el estudio de la ubicación de los estudios de comunicación en las primeras 40 universidades del ranking de Shangai. Para ello, se han estudiado los planes de estudio (grado y postgrado) y la disposición estructural de sus facultades tanto en el campo de la comunicación audiovisual como del periodismo. Los resultados demuestran que, frente a lo que comúnmente se da por sentado, nuestras titulaciones se suelen encontrar mucho más cerca de centros vinculados explícitamente con las "humanidades". Del mismo modo, mostramos cómo el número de universidades que apuestan por la comunicación es notablemente alto (80% del núcleo del ranking). Finalmente, se debate la posibilidad de definir una nueva epistemología de las ciencias de la comunicación, que asuma su carácter interdisciplinar, esto es, como espacio disciplinar en el que concurren saberes humanísticos y de las ciencias sociales.

1. Introduction: communication studies in higher education in Spain

Communication studies is an extraordinarily young discipline, particularly in Spain, which leads us into considerable epistemological confusion. Its beginnings are difficult to trace, although it seems clear that, at least since the 1950s, it has been quite possible to make out a new field owing much to the achievements made in disciplines as distant as rhetoric, aesthetics, philosophy of language, sociology and statistics. The appearance of the first faculties of information sciences (Complutense University of Madrid, Autonomous University of Barcelona and University of Navarra) goes back just over 45 years – not very long if we think about the 100 years of history of many other disciplines. In fact, the most notable expansion of the discipline took place in the 1990s with the establishment of courses on journalism, advertising and public relations, and audiovisual communication in many universities in this country, to the point where now they exist at more than 50 public and private higher education institutions (Saperas, 2016).

If we look back into the history of thought, though, the study of communication conceived in a broad sense has by no means been ignored as a subject of study. It is clear that communication has been a subject of reflection at least since the world of the Greeks. If instead of using the term "communication", which is too vague and imprecise, we examine the problem of reflection on the nature of "representation", we immediately think of writings by Plato, Aristotle, Leonardo da Vinci, Descartes, Kant, Schopenhauer and others – in other words the whole tradition of the philosophy of language and the philosophy of art for more than 2,500 years. The study of forms of literary narrative (including the most popular forms of story, myth, literature, and so on), which feeds into current audiovisual narrative, also goes back to the Greek world. In this tradition, Aristotle's *Rhetoric* continues to be an undisputed reference, with its extraordinary value and relevance even today.

Meanwhile, the first treatises on the practice of journalism go back to the 18th century; the first studies of photographic technique were written by the creators of the medium Niépce, Tabolt and Daguerre in about 1840-50; the first writings on advertising communication go back to the end of the 19th century; the first manuals on cinematographic technique, film scriptwriting, and so on were written in the 1920s; the first writings on radio production appeared almost simultaneously with the birth of radio as a medium; the first studies of television production techniques emerged in the United States a few years after the beginning of regular broadcasts in the 1950s, and so on. Meanwhile, the study of the general problem of signs began with the Charles Sanders Peirce's philosophical work in the United States, particularly *Studies in Logic* (1883), at the end of the 19th century, while the first European semiotic studies go back to *Cours de lingüistique générale* by Ferdinand de Saussure (1915). The first semiotic or semiological studies applied to the field of mass communication did not appear until the 1950s, with the works of Roland Barthes, Umberto Eco and others. Meanwhile, much research has been carried out in various disciplines in the field of experimental sciences since the 19th century on the technical characteristics of the image, the physical media where images are fixed, and so on. In this way, many aspects currently dealt with in subjects like "Image theory", "Audiovisual narrative", "History of film" and so on, have been the subject of study in disciplines with a long academic tradition such as History of Art, Philosophy, Philology, Psychology and others, as well as other fields of knowledge like Physics, Chemistry, Engineering and so on. As early reference works based on deep reflection on the nature of the mass media, we might mention Benjamin's studies of the photographic medium (1931, 1936); Arnheim's studies of photography (1939), radio (1936) and film (1932); the writings by Adorno and Horkheimer that founded mass media critical theory (1944); by Adorno and Eisner on the relationship between popular music and film (1942), and treatises on film music composition by Kurt London (1936) and Hans Eisler (1947).

This small sample means we can see that study and critical reflection about different mass media, from both a theoretical and a practical point of view, considerably predate the establishment of regulated university studies of communication sciences in Spain. It must be remembered in this sense that the existence of vocational colleges to train journalists, advertisers, film-makers, and others goes back to the 1930s in Spain, but in other countries, such as the United States, France, Great Britain, Russia, Italy, they were established in the first quarter of the 20th century.

1.1. The fragmentation of knowledge in the university context

In fact, our intuition is that communication studies have arisen thanks to two parallel "epistemological narratives", showing a nature split between humanities and social sciences.

The first of these, exclusively rooted in the field of the humanities, would connect our states of knowledge with the early problems of language already being sketched out in Classical Greek texts, spearheaded by Plato's *Cratylus* (2004) and Aristotle's *Rhetoric* and *Poetics* (1974, 1990) later following a line passing through the liberating yearning for reason to end up as an interlocutor raising the problems of contemporary

humanity with different degrees of success. Along these lines, it is worth recalling that Plato criticised the Sophists not only because they *charged* for their lessons, but rather because they *showed contempt* for the truth of knowledge and *sold* it to the highest bidder – including, of course, those who would use it in an unjust or evil way.

The fact that various philosophers of the calibre of Benjamin (1973) and Heidegger (Rodríguez Serrano, 2017) incorporated the media as subjects of study in their largely critical reflections appears to provide powerful justification for "communication sciences" being, at least, interlocutors for humanist knowledge. In addition, the fact that communication studies arose practically as a *totum revolutum* of small segments of knowledge ends up supporting the contemporary overall view of thought which sees the humanities as a decentralised field linked to thought which is always relative(Lyotard, 1984), and even *liquid* (Bauman, 2001) – using that word with all possible reservations. The price communication studies pays for aligning itself with this story is, therefore, its direct rejection of developing the more limited positivist research methods that have configured the dominant structure of the contemporary paper.

However, if we look at the field of social sciences, we also find interesting material for the debate. If we take John Fiske's canonical textbook (2011) as a reference, we see that the American author places the origin of our discipline at the creation of the famous model by Shannon and Weaver at the end of the 1940s. Paradoxically, the origin of this text was a creation that emerged from pure maths – Shannon's famous *A Mathematical Theory of Communication* (1948). In a way, it was related not so much to the process of *human* signification of the – and the bad pun is deliberate – *humanist* system, but rather to debates on communication between machines that had given rise to the beginning of a very specific brand of the philosophy of the mind: the creation of artificial intelligence (Copeland, 1993; Moody, 1993), including, of course, Turing's famous experiment (1950).

This second "narrative", which places communication only – or pre-eminently – within the field of social sciences also has its own problems. Thinking about our field based on Shannon and Weaver broadly involves tacitly accepting the "functionalism" of mental processes and their connections in order to embrace an exclusively cognitivist approach (Bechtel, 1991). Summarising the communication process as an exchange of packets of information, with its particular and extremely well-known system of actors and actions (*broadcaster, receiver, channel,* etc.), is, as can be drawn from certain reflections by Pascual F. Martínez-Freire (1995: 99), a way of flattening communication processes into a simple interplay between "mental processes" and – let's be clear about this – "computer software". We have already mentioned Turing's machines, but we could also include Searle's famous Chinese translator (Liz, 2001: 121) (the latter generally thought critically) as highly complex seminal experiments showing that, in the end, the processes our discipline attempts to study do not always, perhaps, correspond to *measurable, quantitative, controllable* or even *parameterisable* variables.

As we see, a cul-de-sac opens up before us. Contrasting with the praiseworthy efforts of those who *only* want to uphold the validity of scientific methods as the way to follow in the communication sciences is the uncontrolled methodological breadth of the humanities with its mindboggling list contradictory and not easily verifiable conclusions. From utterly rigorous data processing which seems to offer some techniques from what is known as "social communication" (Gaitán Moya & Piñuel Raigada, 2010) to the explicit championing of a kind of "anti-scientific" approach that places its trust in critical theory and discourse analysis (Palao Errando, 2004).

At this point, it seems relevant to remember that, from an etymological point of view, the term "science" comes from the verb "scire", which means "to know". However, in a more orthodox academic context, a tautological solution is normally used to define "science" as the knowledge obtained "through the application of the scientific method" (Bunge, 1979). As Chalmers (1984) asserts, it does not seem very reasonable to accept a rigid view of what scientific knowledge is or to believe in the existence of a single, atemporal scientific method, as science is also a "social and political practice" related to its historical time. From here, it is a small step to using expressions like "communication sciences" or "human sciences" which, deep down, champion the relevance of this kind of knowledge against the hegemony of the "experimental sciences". This is clearly fighting talk.

We could resolve the issue by recommending some sort of timid compromise if it were not for the fact that social and economic reality in Spain points in another, very different direction. As different voices have already suggested over the last few years (Reig, 2014; Giménez, 2016; Goyanes, 2017), we have noticed that the acritical acceptance of "communication sciences" as a subsection of "social sciences" is generating a series of difficulties in fields as varied as the design of curriculums, the assessment of researchers and, of course, economic contributions. To a type of education already infected with a degree of "technologism" which in the last few years has focused more on technological competences than promoting critical thought (Llovet, 2011), there is now added a hermetic carrot and stick system dominated

by the inevitable international impact indices and their notable disdain for the "humanities" generated in the mixed bag that is the *Web of Science* category.

1.2. The assignment of communication in academic institutions

As is well known, in Spain we face the controversial problem of the assignment of communication studies to the D18 category (Social Sciences), within the parameters of quality assessment agencies. As set out in the criteria approved by ANECA and dated 17 November 2017, this covers disciplines as distant from one another as audiovisual communication and advertising, journalism, social anthropology, librarianship and documentation, moral philosophy, political science, and social work and social services administration. This rejects the relevance of carrying out humanist research within communication studies and encourages a single model, a single language and – the conclusion appears inevitable – single lines of action and thought. A simple glance at the requirements marking the new models of accreditation for type A university professors or tenured lecturers shows that those who want to take up these teaching posts will have to bow the knee to generally English-speaking publications charging outrageous prices for publishing. We should not forget this is paid for with public money that could be used to strengthen university staffs that are subjected to a new system of depressing instability (Zafra, 2017). And it is more terrible still, as, if there is only one way of carrying out research, humanist intellectual reflection linked to communication is, to put it crudely, suicide. As different researchers have indicated (Carrasco Campos & Saperas, 2016; Piñuel Raigada, Sánchez Carrión, Peñafiel & Marzal Felici, 2017), an increasingly standardised scientific method is becoming imposed in the field of communication. It is quite impermeable to innovation and corresponds to the consolidation and institutionalisation of a single canon of markedly functionalist and instrumental research methods prioritising methodological-procedural aspects over theoretical reflection with a tremendous (self-)replicating strength based on quantitative empiricism. It often ends up by cultivating tautology, irrelevance and mechanical description, ignoring comprehension, evaluation and even involvement in the study of communication phenomena that lie outside the interests of its agenda.

Having reached this point, we feel the need to formulate a couple of research questions to guide this study: where are we *at the moment* with communication studies in the international sphere? Does their place, as seems to be assumed, correspond to the sphere of the social sciences? To answer this, we will begin with a double approach: firstly with a necessarily quantitative methodology and then with a critical reading that allows us to deal with the complexity of the situation. The next sections will deal with this.

2. Proposed research work, methodology and objectives

We devoted 2016, 2017 and 2018 to a careful study of the position of communication studies in the *Shanghai ranking*. As is well known, this ranking depends exclusively on the continuing activity of a series of lecturers from the *Center for World-Class Universities* which is part of *Shanghai Jiao Tong University*. Since 2003, every year this department has been carrying out careful worldwide exploration, which includes the following values among its quality measurement algorithms:

> a) Number of citations collected by resident researchers at each university in the international context;
> b) Number of articles published both in the *Science Citation Index* and the *Social Science Citation Index;*
> c) Number of *lecturers* and *students* winning particularly important prizes in the scientific sphere;
> d) Ratio between the number of full-time staff contracted and the centre's research production.

We have decided to prioritise the Shanghai ranking over other similar ones around the world – notably the *QS World University Rankings*, the *University Ranking by Academic Performance* (URAP) from the Technical University of the Middle East in Turkey, and the index developed by *The Times* – because of its historical track record, its general acceptance in academic spheres and the clarity with which its data measurement methodology is set out. It is also important that it is an index that has deliberately ignored the working methods of the humanities in favour of the social sciences, so in principle it seems much more suitable for "taking the pulse" where we detect it is most urgently needed: upholding an approach that does not disdain the legacy of the *studia humanitatis*. Or, to put it more clearly, we consulted the primary source that seems to justify the need for our discipline to be measured within the "social sciences".

The subject of study is still a delicate one, though. A superficial glance at the academic bibliography it has generated quickly shows a polarisation in opinions of it. The reasons generally adduced in its favour lie in the validity of its measurement system and the relevance of the statistical operations generated (Docampo, 2011; Docampo & Cram, 2014; Taylor & Braddock, 2007), while the criticisms coalesce either

around the lack of rigour with which it prioritises some indices above others (Billaut, Bouyssou & Vincke, 2010) or directly around its noxious effects on the worldwide university community (Amsler & Bolsmann, 2012). Although we cannot enter into this type of consideration at the moment, we have tried to maintain a critical distance from the data offered by the platform.

Along these lines, we focus our attention on the first 40 places in the general ranking including all the universities. Although it has a specific section dedicated to the *communication* field, in this study we have preferred to work on the general ranking to try to also find out *how many* of these highly thought of universities offered specific studies in our field and where these were.

During the working process, comparing movements in the ranking between 2016, 2017 and 2018, we detected that hardly any universities left or joined the list. There was also hardly any movement up and down – never more than four places. These led to small changes in the final indicates but seem to point to a stable, established model of the production of scientific work. Finally, the list of universities studies was configured as follows:

Table 1: Set of the 40 universities studied according to data from 2018

Num.	University	Num.	University
1	Harvard University	21	University of California, San Francisco
2	Stanford University	22	University of Tokyo
3	University of Cambridge	23	University of Toronto
4	Massachusetts Institute of Technology	24	Imperial College London
5	University of California - Berkeley	25	Northwestern University
6	Princeton University	26	Duke University
7	University of Oxford	27	University of Michigan - Ann Arbor
8	Columbia University	28	University of Wisconsin - Madison
9	California Institute of Technology	29	University of Copenhagen
10	University of Chicago	30	Rockefeller University
11	University of California (UCLA)	31	University of Carolina at Chapel Hill
12	Cornell University	32	New York University
13	Yale University	33	University of Edinburgh
14	University of Washington	34	University of Manchester
15	University of California (San Diego)	35	Kyoto University
16	University of Pennsylvania	36	Sorbonne University
17	University College London	37	University of Minnesota, Twin Cities
18	Johns Hopkins University	38	University of Melbourne
19	Swiss Federal Institute of Technology Zurich	39	University of Colorado
20	Washington University in Saint Louis	40	University of Texas at Austin

Source: Self-created.

Having selected these 40 universities, research was designed in accordance with the following objectives:

01. To find out how many universities offered degree or equivalent courses, depending on the specific characteristics of the education system in each country, included under the general label "communication". We are looking for courses offered that incorporate elements of audiovisual communication, journalism and advertising in an integrated way. In addition, we would like to know whether this takes place in the first or second part of the student's university life.

02. To find out how many universities offered degree and/or postgraduate courses – or the equivalent depending on the specific characteristics of the education system in each country – in the specific field of audiovisual communication and how many in the specific field of journalism.

03. To find out how many universities offered independent courses both in audiovisual communication and journalism that could be studied through "free access" by other students regardless of their original degree.

04. To locate the exact position of communication studies within the different departments, faculties or schools where they exist.

As might be expected, this design of research presented more than a few problems that must be taken into account when it comes to reading the final results. Firstly, the different configuration of higher education courses around the world has its own characteristics which do not always make it easy to standardise our concept of degree/postgraduate courses, with all the minors, majors, undergraduates, graduates and many other different names given in curriculums in countries as far apart both geographically and in their educational legislation as the United States, the United Kingdom, Japan and France. Along these lines, we have tried to consider as postgraduate courses only qualifications officially leading to the development of possible doctoral studies, leaving aside all specialisation courses that do not include research as one of the possible fields of study.

The second problem is related to the eccentric nature of advertising courses, which usually form part of marketing courses or appear in specialist business schools. This is illustrated by the fact that we have located only very few examples – the *University of Carolina at Chapel Hill* and the *University of Illinois at Urbana Champaign* – where we can clearly detect advertising content integrated into the audiovisual communication or journalism areas. This is therefore a blindspot in our study that must be looked at again in future research.

The third problem concerns research objective 01 and involves the position – particularly, as we will see, on journalism courses – often occupied by courses and postgraduate studies outside the "official" organisational chart of the faculties of any particular university. We have been able to detect that on some occasions this content has been left in the hands of what are known as hubs, or specialist research institutes, which, in cooperation with the main institution that hosts them, generate a series of regulated, official and highly specialised content, although, on paper, they are not clearly attached to a faculty or school. We will return to this idea.

Having detected these problems in the design of the research, a detailed study was made of the position and design of the content linked to communication at the 40 universities, extracting the information necessary to systemise the results. Firstly, we detected that 17.5% (N=7) of universities occupying the top 40 places did not offer any kind of content directly linked to research. In general, these were extraordinarily specific technology centres linked to very particular areas of knowledge, such as *Pierre and Madame Curie University – Paris VI* (a centre linked directly to the Sorbonne and focusing exclusively on natural sciences) or *Rockefeller University* focusing largely on research on health or aspects related to microbiology. The case of *Pierre and Madam Curie University – Paris VI* also involves a bibliometric problem in our study, as it has changed its name since 2018 and now appears in the ranking with the general *Sorbonne University* (position 36 in table 01). At the time of writing, it had not yet been made explicit whether the data processing carried out by the Shanghai index applied only to the scientific institute – as has become traditional – or to the whole university, so we have decided to work only with data collected during 2016 and 2017 in this respect. The other universities (82.5% N=33) generated specific content suitable for study. This sample was analysed, in turn, based on nine variables corresponding to research objectives systemised in the following table:

Table 2: Measurable variables. Division into areas of interest and items

Area	Average item
I. Existence of general "Communication" studies	01. Presence of introductory courses with a general design (*minors, undergraduates…*)
	02. Presence of a general design in higher education courses (*majors, postgraduates…*)
II. Existence of content linked to different aspects of audiovisual communication (*media studies, film studies, TV studies, photography studies…*)	01. Degree courses linked to the area
	02. Postgraduate courses linked to the area
	03. Existence of free choice courses in the area
III. Existence of content linked to different aspects of journalism (*political journalism, cultural* or *economic journalism,* etc.)	01. Degree courses linked to the area
	02. Postgraduate courses linked to the area
	03. Existence of free choice courses in the area
IV. Position of communication studies in the university's organisation chart	01. Attachment to a particular humanities, social sciences or other department (see table 03)

Source: Self-created.

As can be seen, each of these areas corresponds directly to each of the research objectives set out above. We must also add that area IV requires greater data refinement, as the situation of each qualification generates very different aspects. Following the central research objective – to determine its position on the humanities vs. social sciences scale – we decided to generate a specific code book considering not only the three categories appearing most often ("humanities", "social sciences" and "arts") but also mixed cases and other variables worth taking into account. The result is as follows:

Table 3: Codebook corresponding to the variable IV.01

Number	Department/faculty/school to which the content is attached
1	Departments linked to the humanities and social sciences
2	Departments linked exclusively to the "humanities" category
3	Departments linked exclusively to the "social sciences" category
4	Departments linked exclusively to the "arts" category
5	Specific "communication" departments
6	Specific "audiovisual communication" departments
7	Specific "journalism" departments
8	Departments outside the university's main organisation chart (university outreach schools, affiliated institutions, etc.)
9	Interdisciplinary or unspecified departments
10	They do not have courses of this kind

Source: Self-created.

As the research is constructed only using nominal attributes, we proceeded to analyse it with descriptive statistical methods. The data was processed using the SPSS v. 24 program.

3. Fieldwork results

3.1. Communication as a general educational label

The hybridisation of the three degrees that have traditionally constituted – and still constitute – "communication sciences" courses in Spain has been one of the liveliest topics in academic debates over the last few years. In fact, it must be remembered that, at one of the most sensitive times in the controversy because of the implementation of the 3+2 system (three-year degree courses plus two-year master's courses), the possibility was proposed in various forums of drastically reducing staffs and resources at our institutions, squeezing the current first cycle of three qualifications into a common *totum revolutum* of 180 ECTS credits and leaving specialisation only for hypothetical – and much more financially costly for students – postgraduate programmes with 120 ECTS credits.

Beyond the fact that any averagely responsible communication teaching professional could detect the educational aberration involved in this kind of reductionist approach, we wanted to see how many universities in our sample had gone for a similar model and, above all, *how they were doing it*.

Of the 40 universities studied, we detected common communication courses in 14 of them (35%), all in North America. In the same way, we found an almost exact correlation between the "general" offer in courses equivalent to the first cycle (*I.01* 32.5% N=13) and the higher offer (*I.02* 35% N=14). However, although this figure seems to tangentially support the possibility of having courses of this kind, when looking at the curriculums we have detected that, with hardly any exceptions (Stanford), the undergraduate and graduate programmes grouped under the general "communication" label have a very wide range of options nothing like the rigid framework laid down by Bologna for the initial configuration of the degrees and far from the instability created by generating 180 general ECTS credits while gradually reducing lecturing staffs to a minimum.

We will look at two contrasting examples. We have already mentioned Stanford, which includes a major in Communication Studies which, although it is offered under a general label, basically focuses on digital journalism with touches of sociology. The dominant model, on the other hand, would be that of the University of California (UCLA), offering a single major incorporating content of all kinds from the cultural industries, from the classic Film Studies to education on musical production, consultancy for social services or communication for citizens at risk of exclusion, taking the form of three non-compulsory "paths". The range offered by almost all the universities studied combines, optionally, courses combining all areas of communication. However, their flexibility and richness allows customised, panoramic, high-quality education at both degree and postgraduate level.

3.2 The state of Audiovisual Communication studies compared with Journalism in the context of the Shanghai ranking

We will now compare the specific programmes covered by categories that would be compatible with the ones that can now be found on our national scene. The breakdown of the institutions studied is as follows:

a) In the case of *Audiovisual Communication* studies, we might point out that exactly half of the institutions analysed (*II.01* 50% N=20) had specific degree courses in the area, while, in the case of postgraduate courses, we found slightly more (*II.02* 57.5% N=23).

b) In the case of *Journalism* studies, we note considerably fewer degree courses (*III.01* 25% N=10), with slightly more *majors* and *postgraduates* (*III.02* 37.5% N=15). It is interesting to point out that an explanation of this divergence from Media Studies is partly due to their different position in university organisation charts. In general, this kind of education is treated with a higher level of specialisation, which is likely to place it in hubs or institutes. We will return to this idea in the next section.

The issue of free choice courses offered to strengthen or enrich a university community as a whole deserves a separate reflection. In this case, both Audiovisual Communication and Journalism content have a great presence in curriculum design. The first (*II.03* 80% N=32) and second (*III.03* 75% N=30) cases are quite close and show that this content is supported and taken into account by the managers of the academic institutions.

3.3. Communication studies: between social sciences and humanities

Finally, we arrive at the question about the *position* of communication studies in the specific organisation chart of each institution. Taking the code book we attach in Table 4 as a starting point, the results in the case of *Audiovisual Communication* are as follows:

Table 4: Position of *Audiovisual Communication* studies

Universities	Frequency	Percentage
Departments linked to the humanities and social sciences	6	15%
Departments linked exclusively to the "humanities" category	5	12.5%
Departments linked exclusively to the "social sciences" category	3	7.5%
Departments linked exclusively to the "arts" category	6	15%
Specific "Communication" departments (integrating perspective)	4	10%
Specific "audiovisual communication" departments	6	15%
Interdisciplinary or unspecified departments	4	10%
They do not have courses of this kind	6	15%
Total	40	100%

Source: Self-created.

As we can see in the first place, the departments place the discipline in the humanities *and* the social sciences are not in a majority (F_1 15%, N=6). However, we can also see something of a revival in its attachment to the specific field of the humanities (F_2 12.5% N=5) compared to the institutions that place it exclusively in the social sciences (F_3 7.5% N=3). An added problem is the introduction of the *Arts* category within the classification. This seems to be particularly important (F_4 15% N=6), although this is not the case in Spain. It must be pointed out that this kind of curriculum is much more focused on *Film Studies* or the study of photography, generally combining traditional history or aesthetics subjects with new artistic disciplines linked to net art or the various digital tools for artistic creation. In any case, it is interesting to highlight that the encounter between *arts* and *humanities* ($F_2 + F_4$ 27.5% N=11) is important. This is a frequent nightmare for those who come to the discipline as a kind of natural continuity – the bad wordplay is deliberate – with the natural sciences, a dominant situation in the most successful universities.

We will now look at what is happening to *Journalism* courses:

Table 5. Position of *Journalism* courses

Frequency	Percentage	Accumulated percentage
Departments linked to the humanities and social sciences	8	20%
Departments linked exclusively to the "humanities" category	2	5%
Departments linked exclusively to the "social sciences" category	1	2.5%
Departments linked exclusively to the "arts" category	2	5%
Specific "Communication" departments (integrating perspective)	4	10%
Specific "Audiovisual communication" departments	1	2.5%
Specific "Journalism" departments	9	22.5%
Departments outside the university's main organisation chart	2	5%
Interdisciplinary or unspecified departments	1	2.5%
They do not have courses of this kind	10	25%
Total	40	100%

Source: Self-created.

This time we find much more solid results. We see that the greatest concentration of institutions with courses in this area are in faculties, schools or institutions which either clearly accept its hybrid position half way between the humanities and social sciences (F_1 20% N=8) or directly in institutions accepting the practice of journalism as being in its own category (F_7 22.5% N=9). By great contrast, relationships between journalism and humanities or arts courses are very rare and are usually more linked to content related to creative writing or even philology.

This photograph allows us to suggest, although in a purely hypothetical way, that the division between "social sciences" and "humanities" is also a result of the perception of the methodological, teaching or research activity itself, separating professionals specialising in journalism and audiovisual communication respectively. This idea would need careful exploration to find out directly about the possibly artificial way in which different research techniques are now "imposed" – for example quantitative explorations of big data, surveys and other apparently "verifiable" and "objective" strategies – in field work that does not accept them so easily, such as film studies, the phenomenology of the image, aesthetic or narratological reflections and so many others.

4. Discussion: towards a new epistemology of communication sciences

4.1. The scientific status of communication sciences

We believe it is relevant to recall, as José Ferrater Mora (1978) has pointed out, that in the history of scientific thought we can speak of the existence of two great moments when the place of the different disciplines around which knowledge is structured was examined in depth. Firstly, in the Renaissance, with the appearance of modern science, there was a crisis of the "tree of sciences" that led to a first great split between the theoretical and practical orders resulting in the establishment of a dividing line between the sciences of nature and the sciences of the mind. Cartesian thought is, perhaps, largely responsible for this first fracture of knowledge, although the on the "knowledge tree" it still appears hierarchised, or, in other words, inter-related. The second moment happened at the beginning of the 19th century, with the eruption of Comtian scientific positivism. The development of disciplines like physics, biology and chemistry, coinciding with the industrial revolution, saw the flourishing of natural sciences which served as a model and a reference for the development of sciences of the mind.

Auguste Comte's project (1975) proposed to transfer the scientific method to this very sphere, as it had shown itself to be so successful in the field of natural sciences, capable of offering "positive" knowledge; in other words, knowledge that allowed "social progress". The purpose, then, was to construct "positive" knowledge, following the Comtian maxim "know to predict, predict to provide". In this principle, we can make out two fundamental aspects of scientific knowledge: firstly, knowledge serves to predict. In other words, science discovers or formulates laws of nature that serve to predict future decisions. Secondly, prediction serves to provide solutions – in other words to produce wealth, better knowledge, greater welfare, and so on. The same verb, "serve", reveals a fundamental facet associated with scientific knowledge, especially in the area of natural sciences: the concept of *utility*. The Comtian proposal consisted of extending the positive scientific method that had been so successful in the sciences of nature to the sciences of the mind.

In this way, Comte's initial approach has generated the need in the humanist and social disciplines to see

empirically verifiable, logical/deductive laws. And in the 20th century the Comtian perspective saw its approaches radicalised with the development of logical positivism in the 1920s through what was known as the "Vienna Circle". Although logical positivism has been subjected to strong criticism in the field of the philosophy of science by scholars like Popper, Kuhn and Lakatos, among others, it remains clear that this line of thought has been able to generate a permanent "pose" of negativity among the human and social sciences, which are always "inhibited" with respect to the natural sciences, even questioning their status. The human and social sciences have earned the image of "poor relation" in scientific communication, which has led to a constant effort to achieve scientific approval.

At the beginning of the 21st century, we have seen a new fracture emerge on the map of scientific knowledge. To the radical separation between the sciences of the mind and the sciences of nature, at least in Spanish universities, is added a new fracture, this time between social sciences and humanities. In the old "national rating" system, implemented with the approval of the Universities Act 6/2001, of 21 December (LOU), lecturers were selected and organised by areas of knowledge. This situation substantially changed with the reform of this procedure and the publication of RD 1312/2007, of 6 October 2007, establishing the national accreditation system for access to the university teaching bodies. This laid down the existence of five branches of knowledge: Arts and Humanities; Sciences; Health Sciences; Social and Legal Sciences; and Engineering and Architecture. This decree stated that "in all cases, procedures will be available so that applicants developing a multidisciplinary or interdisciplinary specialisation in scientific spheres, including two or more different branches, may be accredited in more than one branch as a result of the same evaluation process" (article 3). This possibility finally disappeared with Royal Decree 415/2015, of 29 May, amending Royal Decree 1312/2007, which, in its Appendix I, determined the list of accreditation committees and the areas of knowledge assigned to each of them. In this way, the areas of knowledge "Audiovisual Communication and Advertising" and "Journalism" are assigned to Committee D18 of the "Social and Legal Sciences" branch. It is quite notable that, from our consultations with various sources in educational administration, the determination of the five branches of knowledge and 21 accreditation committees and areas of knowledge attached to them was never debated within the university community or with any scientific organisations in different areas or with the respective faculties concerned.

4.2. The identity of communication studies: discipline or disciplinary space?

It seems we need to highlight the enormous difficulty in specifying an objectivable subject of study with a name like "communication", as it is so open and generic, including a great many disparate things. We should remember in this sense that the traditional conception of scientific knowledge, made by scholars like Suppe (1974) or Nagel (1978), indicates that all scientific disciplines are characterised by having a precise subject of knowledge and a specific scientific methodology or methodologies to tackle the study of this subject.

In our judgement, this traditional conception has been superseded even in the field of experimental sciences, such as material physics, molecular chemistry, nanotechnology, geometry, astrophysics, etc., which now pay great attention to developments in the widest range of disciplines. In these fields of knowledge, we have become aware of the fact that scientific research is not the expression of a single type of rationality and, often, even artistic creativity can become a source of inspiration for formulating new scientific theories (Fernández Mallo, 2018). In the field of human and social sciences, the formulation of new scientific theories such as fractal theory (Benoît Mandelbrot), catastrophe theory (René Thom) and chaos theory (Edward Lorenz), initially formulated in the fields of geometry, theoretical physics and climatology, are finding applications in the area of sociology. This type of theory is now being applied in the study of social phenomena as complex as market research (when it comes to launching a particular product), audience behaviour, voting intentions and trying to predict economic cycles, although its principal developments originally occurred in the fields of mathematics, climatology, chemistry, and so on. In all cases, it is a matter of defining *elastic laws* that can explain and predict, in these cases, certain social behaviour. In the area of social sciences, we are moving, then, in a highly mutable, unstable territory of knowledge which requires the use of all necessary instruments to study social and cultural phenomena in sufficient depth.

The area of communication sciences is extremely broad and complex, to the point that *multiple subjects of study* can be recognised. To these, very diverse and divergent working perspectives or *research methodologies* must be applied. In our opinion, this is one of the characteristic features that make this territory – which has to be interdisciplinary – more attractive and interesting, as multiple scientific traditions are becoming involved in the study of communication phenomena. They largely come from the fields of human and social sciences, but in some subjects from the natural sciences as well. We can state, in line with the thought of Miquel de Moragas, that the field of communication studies is fertile territory

for *interdisciplinarity*, as this involves "comparison and exchange of methods and points of view" (Moragas, 1986). This is an important step towards the construction of a *disciplinary space*. Other scholars like Mauro Wolf (1987) and Armand Mattelart (1987) have also referred to the same problem, showing how the encounter between disciplines in the study of communication has not yet been capable of generating a fertile comparison of orientations – a productive dialogue between working perspectives. Instead, there has been a continual flight from dealing with scientifically awkward social issues.

4.3. The scientific nature of the discipline and academic policy

In this context, we might wonder about the consequences of the lack of what has been called "organic interrelation" between disciplines. Without any doubt, the first "victims" of this situation are the areas of knowledge of *journalism* and *audiovisual and advertising communication*, with a very considerable academic, scientific, social and political cost. This is translated into a lack of representation of these areas in many educational, scientific and business institutions. The group most directly affected by this situation are the students on degree courses directly dependent on our areas of knowledge. Too often, students on these degree courses have to study many subjects dependent on areas of knowledge outside communication, whose approaches and working perspectives may be conflicting, and sometimes hostile and contradictory. This shows a clear denial by the teachers responsible (from much older and more consolidated areas of knowledge – history of art, psychology, philology, marketing, and so on) of the legitimacy of our still young scientific field.

In this sense, it must be stressed that the scientific standard of research produced in the communication departments of faculties of information sciences and communication sciences is very notable, as confirmed by the large number of doctoral theses and research that have been published in the last few years. Although UNESCO's list does not reflect this situation (Marzal-Felici, García-Jiménez & Humanes, 2016), the sections of bookshops and libraries devoted to communication studies are perhaps the most frequented by readers with a considerable demand from the public. Most research carried out in the "Audiovisual Communication and Advertising" field, particularly in the academic context, are characterised by first defining the limits of the research and the nature of the proposed subjects of study. In other words, following a rigorous scientific method, understood as a procedure for dealing with a set of problems following a strict order of operations (Nagel, 1978).

The application of this scientific methodology to subjects as complex as image theory, the construction of brand image, the analysis of audiovisual stories, knowledge of audiovisual production techniques and production, the effects of new audiovisual technologies, the analysis of current trends in the field of political communication and the study of digital journalism, among others, is extraordinarily difficult, largely because each subject of study, which first has to be precisely defined, requires the development of specific research techniques which are necessarily heterogenous. Perhaps this is one of the reasons explaining the difficulty of research in the field of communication studies. The mutability and complexity of the subject of study – approachable from different perspectives – as well as the large number of variables suitable for being studied in analysing the situation of communication – economic, historical, sociological, psychological, operational, narrative, aesthetic, technological, etc. – establish a research subject that is essentially multidimensional in nature and, requiring the use of interdisciplinary research techniques in communication areas. This situation has made possible and even encouraged a breakdown of the historical compartmentalisation of knowledge resulting in the development of *interdisciplinary* perspectives beyond the initial multidisciplinarity in which there is no *dialogue* between methods and perspectives.

5. Conclusions

At this point, we should go back to the four research objectives we proposed at the beginning to quickly draw the following conclusions:

Objective 01: More than 80% of the universities occupying the top places in the Shanghai ranking have courses in the area of communication, in areas equivalent both to our degrees and to our postgraduate courses. These courses, when generated in an integrated way, do not have a rigid design comparable to the system proposed in the latest attempts to implement an enforced 3+2 (common degree + specialist postgraduate course). Instead, they promote great flexibility and freedom of choice for students, broadly covering all factors in the "communication" field.

Objectives 02 and 03: Of the 40 universities studied, half have specific degree and postgraduate courses directly in audiovisual communication, and slightly fewer have specific journalism courses. In addition, all the universities studied with their own communication courses offer their own content in the discipline for

the whole university community through different formulas – as opposed to the divergence in the Spanish case where, as is well known, after the "free choice" subjects are eliminated, students can (and usually do) end their degree courses without even minimal contact with other fields of knowledge.

Objective 04: Within the university organisation charts, audiovisual communication studies are positioned much nearer to the "humanities" and "arts" categories, while journalism is usually positioned nearer to the "social sciences", particularly in institutions dedicated to the discipline. In the curriculums for these courses, a high percentage of content is related to the humanities.

In order explain the mutability and complexity of the subject of study of communication sciences, and even of humanities and social sciences, it should in general be pointed out that the very subject of study – any phenomenon in the field of communication – is deeply "contaminated" by the subjective condition of its creation and perception. In fact, communication, as cultural production, is the result of human creativity and it bears the fingerprints of a subject whose complexity transcends any other kind of research that could be carried out. Simplifying things a little, if it is a question of placing the field of studies of communication within two opposing gnoseological traditions – the mathematical and hypothetical deductive tradition of the experimental sciences and the critical-hermeneutic tradition of the human and social sciences – it is clear that the communication sciences must clearly come within the context of the critical-hermeneutic scientific paradigm, as the instance of the subject that constructs or receives the audiovisual discourses or texts is one of the keys to understanding it. In one way or another, the study of any communication phenomenon always invokes the subjective instance in a broad sense. It can be seen, on the other hand, that we use the term science to refer to the study of communication or any other phenomenon or product of culture. By now, this should not seem strange, as we understand that we are talking about a very complex set of structured knowledge following patterns and processes of research reasonably well agreed among the scientific community.

The mercantilist order of our society clearly compels us to wonder about the utility of communication studies and how far the knowledge deriving from this "disciplinary area" can have a positive effect on "productive knowledge"; in other words, on the professional practice of the fields of communication (photography, films, television, radio, musical production, dubbing and multimedia production), advertising and public relations, or journalism. In this way, humanistic knowledge of society and culture is strongly conditioned by the positivist 19th-century thought we have already referred to in which the *utilitarian* concept of knowledge is essential and where *prediction* and *production* are both vital for its Comtian logic. In this way neoliberal thought has a considerable influence and in this context no discipline that fails to provide objective, quantifiable knowledge that is immediately applicable and useful for industrial processes and social welfare would not be "scientific" (Marzal-Felici, Rodríguez-Serrano & Gil-Solvevilla, 2018). In this sense, it must be stressed that in the English-speaking world there is no room for a fragmentary conception of scientific knowledge: in the last decade, degree, master's and doctorate studies on videogames have flourished in many English-speaking universities, including knowledge from the spheres of computer programming, mathematics, physics, graphic design and also audiovisual production and narrative, the theory and history of the image, sociology, economics and communication law. In other words, knowledge from the fields of the sciences, the social sciences and also the humanities.

Having reached this point, we believe it is necessary to rethink the often disparaging attempts made to eliminate everything relating communication to humanist thought in a move intended to demonstrate "technicist progressivism". In fact, our work is simply an initial approach that should be continued in the future with a detailed study of the position of advertising and public relations, as well as the sub-ranking dedicated to communication being drawn up by the team from *Shanghai Jiao Tong University* in order to offer a detailed map of the academic profiles that can be identified in the field of communication studies, so as to fill in the deficient UNESCO codes. Perhaps in this way we can manage a plural researcher view, healthier and further removed from dogmas, fashions, personal preferences and ivory towers. This was, after all, the key to the *humanist* project: trusting in our possibilities of establishing an exchange of knowledge while remaining aware of its limits and capable of transcending the political, ideological and economic ideas of the time.

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