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Special issue  
Visual motifs

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## Scientific power in the Spanish press during the pandemic: a portrait of new leaders while explaining its risk

### Abstract

This work is based on the mediatization of society theory, which establishes more attached importance and the presence of the mass media as mediators in various social processes, as well as on Production Studies, that analyse creative skills to draw an audience, to apply these theories to the media representation of the COVID-19 pandemic. The objective is to analyse how the generalist media have represented male/female scientists, who have become social benchmarks during the first COVID-19 wave in Spain. Our initial hypothesis considers that the purpose of the mediatization of scientific discourse was to contribute answers to, and to keep society calm, in an uncertainty context. By content and discourse analyses with a sample formed by 172 pieces of work published between 25 January and 5 July 2020 in four Spanish digital newspapers, we observed how these specialists not only became the usual sources of journalistic information but were also the main leading figures in them. The mass media pay attention to their statements, but also to their aesthetics and communication style, which are singular compared to conventional power to date. Science enters the national section with its own image and explanatory intentionality. Nonetheless, constant overexposure and its link with governments making controversial decisions influence the image held by the public opinion of scientists with time, which dissociates them from its knowledge and identifies them with political power.

### Keywords

COVID-19, scientific communication, mediatization, media cover, iconography.

### 1. Introduction

The pandemic that emerged at the beginning of 2020 has had enormous repercussions on society, and it will be a long time before its consequences are seen in perspective because, among other reasons, when these lines were written, its effects were far from ending, and even far from being mitigated. Apart from the consequences of the virus spreading, which are quantifiable as people infected and hospitalised and those who have died, freedom for millions of people was suddenly limited.

From day 1, the confinement as of March 2020 that the Spanish society had to endure, as did many other countries, involved the increased presence and relevance of all orders in the

mass media and forms of communication. From the very beginning, citizens, who were obliged to stay home from 15 March to 21 June save specific situations controlled by the authorities, witnessed an accelerated mediatisation process in their lives: the media informed them about what was happening by means of media professionals (journalists) or by transmitting public authorities' declarations, which involved a substantial effort to appear before the public opinion and provide explanations. The media allowed communication with other people than those they lived with, and permitted them to work and receive education, and to also escape; in other words, the presence and importance of the media multiplied as they became essential intermediaries in a situation in which any type of contents had to arrive at, or leave homes, by means of available technology.

As an analysis perspective, this work is based on the mediatisation of society theory that attaches more importance and highlights the presence of mass media as mediators in different social processes (Hjarvard, 2008; Couldry & Hepp, 2013) to apply it to the media's representation of the COVID-19 pandemic. It would seem clear that the confinement situation, along with the almost permanent need to use mass media for various purposes, left us in a significantly mediatised scenario. However, this proved to be a poorly studied objective aspect because it had just taken place, and its background was scarce and hard to compare.

Hallin *et al.* (2020) recently analysed the behaviour of mass media in the 2009 influenza A virus context in three countries (Argentina, the USA, Venezuela). Their research concluded that the media covered health authorities' discourse by contributing to reduce the uncertainty about and alarmism of its scope and dangers. By focusing on this new disease which has spread all over our planet, Masip *et al.* (2020) evaluated the receiver perspective (the Spanish public confined during the first wave) with a survey that revealed an increase in both media exposure and interest in acquiring information but drew opposite conclusions to those of Hallin: in this case, the mass media were seen as poorly rigorous actors with a tendency towards sensationalism and generating social alarm. In another survey-based study, López-Rico, González-Esteban and Hernández-Martínez (2020) concluded that the most relevant factor for evaluating the mass media's credibility was ideological affinity and the pandemic contributing to increase polarisation, which agrees with the polarised pluralism model (Hallin & Mancini, 2004) to which the Spanish media system corresponds.

In this context, we centre on a particularly mediatised matter that also has to do with communication by science: the role played by scientists as experts or spokespeople with Spanish society to communicate any kind of novelty, analysis, and interpretation about the pandemic. This role is an extremely important one with a social impact, particularly in the months that confinement lasted, when the Spanish public avidly consumed any information that had to do with such an omnipresent theme in their lives.

Science is one of the institutions that inspires most trust in advanced societies and health is a fundamental value in capitalist societies (Boris Groys, 2008). As Gema Revuelta outlines (2019), in Spain, studies about science's social perception by the Spanish Foundation for Science and Technology constantly reiterate this fact. In its last publication in 2018, 61% of the sample considered that "science and technology serve to especially solve problems." Moreover, health occupied one of the first positions in studies by the Spanish Centre for Sociological Research when citizens were asked about the main problems in their country. One especially important point came over when they indicated the problems that most affected them as individuals. In this case, health was the fourth problem that most worried citizens, behind unemployment, economic problems, and quality employment problems (CIS, 2019–2020, February and March).

### 1.1. *Science in newspapers*

Sociologist Daniel Bell (2006) considered that the appearance of large-scale modern scientific journalism in the 1970s<sup>1</sup> was due to “the need to suitably interpret the scientific and technological nature of progress.” The framework was the Cold War between two large ideological blocks: the USA and the Soviet Union. What was being sought with that scientific information was a logical and empirical explanation of two social and economic models: liberal-capitalist or communist-Marxist. In parallel to these facts, and as a result of them, science and technology contributed to pose risks, such as the atomic bomb, and was sometimes dragged along and affected by the private sector’s mercantile dynamics and its economic interests (Sanz, 2011, p. 52).

Despite science being considered the transforming agent by *antonomasia* thanks to rapid social diffusion and the civil application of new scientific discoveries since the 1980s, daily science sections in Spanish newspapers did not appear until the 21<sup>st</sup> century. Indeed, it is possible to date this milestone: 24 September 2002. On this date, the Spanish newspaper *El Mundo* first published a daily block that exclusively dealt with scientific information, headed by journalist Pablo Jáuregui (2013, p. 10). For the scientific editor, it was “an important step towards the visibility and social relevance of scientists in Spain” who “are morally obliged to spend part of their work and time to allow the public to relate to them by mass media” (Calvo & Calvo, 2011, p.19).

This new daily section, which gradually included other headings, is generally positioned behind pieces on national and international, economic, and social policies. Despite the number of new items about science having increased in recent years, particularly in the biomedical and environmental domains, unfortunately this cannot be stated about their quality. “The seriousness of the matter comes over when a scientific piece of news appears on the front page, then the heading, the supporting image or the theme’s orientation tends to come over in a much more sensationalist tone than that read on inside pages or in supplements” (Revuelta, 2011, p. 228).

Today the sudden appearance of the unexpected, namely a pandemic caused by a coronavirus which has to date been unknown and is baptised SARS-CoV-2, has allowed the spotlight to shine on the scientific class. For philosopher Domenico Secondulfo (2020), “at the centre of the mythology that sustains our world, science is the pillar of our narrative, the hand that holds and bends everything at our will. We accept everything from science, provided it can be shown to be acting.”

In the crisis imaginary, science reappears against representations of political power – and its empty citations –, which was the essence of contemporary society until today’s health alarm situation emerged. For Iván Pintor (2020), this uncertainty framework makes public opinion replace the political class’ impotence with the scientific class’ serenity and explanatory attitude. Its disposition also moves away from the belligerent and threatening discourse that has, in the present-day, characterised the Armed Forces and Security Services (López-García, 2020). The aesthetisation of politics (Benjamin, 1989) is replaced with values of honesty, high moral, sincerity and trusting citizens.

Philosopher and essayist Byung Chul-Han (2020) maintains that, within this framework, it is not only the sovereign “who decides the state of emergency” (Agamben, 2003), but also “who has data” that is evidenced in the big data digital iconography. For this reason, therefore, as an advantage over Europe, he underlines that “in Asia, epidemics are not only fought by virologists and epidemiologists, but also by computer experts and those specialising in big data.” The dehumanised statistical processing of immense figures of infected people and

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<sup>1</sup> The pioneering section Science Times of *The New York Times* was published for the first time on 14 November 1978 and has since been published every Tuesday. John N. Wilford (2004), one of the founder journalists, admits that: “I am a scientific journalist thanks to Sputnik”.

those who have died from COVID-19 is capable of transforming what is invisible into something visible, and of transmitting the illusion of controlling the phenomenon. Numbers become the pillar of our world and “unpleasant reality is exorcised by purifying it as much as possible with the language of science so that infection statistics becomes our life jacket, the sensation of being aware about what is going on,” Domenico points out. Who is fighting the virus against the clock in an attempt to identify an antiviral or a vaccine should also be added to the sovereign concept, which leads in the direction of science.

In such a context, which is one of an “external risk” of a viral origin (Giddens, 2000, p. 38), the public people related to technical and political decisions become subjects who are ethically and politically responsible for society. How society perceives these actors depends on, among other main reasons, the portrait that the mass media makes of them. If as John Berger points out (2002, pp. 15-16), “every image incarnates a way of seeing,” the portrait that the graphical journalist depicts is evidenced in the background that (s)he picks from all the possible ones. Even when reflecting on reality is especially proposed, the tacit imperatives of taste, conscience and novelty when faced with competence predominate (Sontag, 1996, p. 16). Editors’ selections and journalist texts also bring to life a way of seeing, particularly if they are expressed in interpretative genres whose discourse includes prosopographies and ethopeias.

All this is framed within the current of Production Studies (Caldwell, 1995; Thompson, 1996; Banks, 1997), and these authors analysed the degree of conscience and control of the creator of contents that inspire users’ emotional acknowledgement, and very often through some visual forms from the past surviving. In a society of social relationships and moral values, an image can be psychologically and socially important, which is when we think that we “can” know portrayed people.

Our research objective is to analyse how the mass media have mediated the representation of male/female scientists, who have become social benchmarks during the first COVID-19 wave in Spain. The purpose is to observe how generalist media have steered the content and codes of expression in their discourses (Ginzburg, 2014). The specific objectives are to: determine the location and preferential journalist genre of the information headed by scientists (O1); identify in which themes and with what intention these specialists have been invited to speak (O2); analyse the graphic and textual resources with which healthcare experts are portrayed (O3).

Our initial hypothesis considers that the fundamental purpose of the mediation of scientific discourse is to contribute answers and to calm society when faced with uncertainty. Scientists have become benchmarks with a new informative interest and, at least when the pandemic commenced, the media attempted to contribute to reduce discord and fear based on the authority arguments that science provided, with reasoning that has occupied leading news sections in national newspapers in Spain.

Therefore, we wondered how many news items have these scientific benchmarks headed during this period (O1), if such information occupied outstanding places in newspapers (O1), which discourses they reflected (O2), what attitude journalists took with these specialists’ explanations were offered (O3) and how they portrayed them (O3) both textually and graphically.

Public figures are subject to the scrutiny of the mass media that act as superartists. “Today, everyone is subjected to an aesthetic evaluation –everyone is required to take aesthetic responsibility for his or her appearance in the world, for his or her self-design,” maintains Boris Groys (2015, pp. 30-40), who explains: “we can only accept a catastrophe, a state of emergency, a violent rupture in the designed surface, as sufficient reason to believe that we are allowed a view of the reality that lies beneath.”

## 2. Methodology and Sample

The present research work combines two methodological perspectives: a content analysis and a discourse analysis (Wodak, 2003; van Dijk, 2008; van Leeuwen, 2008). By means of both, we observed the background trends that structured and illustrated scientists' role as spokespeople and sources of authority of journalist information about the pandemic. An analysis encompassed the information published by the digital editions of four Spanish newspapers whose diffusion, according to ComScore, the agreed media measurement firm for the sector, were among the 10 most read digital media in Spain during confinement<sup>2</sup>. They also represent citizens' ideological diversity: *El País* (liberal), *El Mundo* (liberal), *el diario.es* (progressist) and *El Confidencial* (conservative).

Our sample was made up of all the informative, interpretative or opinion pieces led by scientists who specialise in disciplines related to the pandemic who by their investigation and development, or by their public management, were selected as the main source or as expert evidence. The columns that specialists signed in these newspapers were also included.

The analysis period covered 162 days from 25 January 2020, the date when the first news item was written by a scientist about the new disease, which referred to two suspected COVID-19 cases, to 5 July 2020, the date when the *El País* published in its Sunday supplement a report about the Manager of the Spanish Coordination Centre for Health Alerts and Emergences, epidemiologist Fernando Simón, whose photo on the front page received many remarks.

After a proactive reading of the published information, a table of the research sample was manually drawn up. It includes 166 mentions made to scientific benchmarks in 144 items signed by journalists and/or agencies (57 by *El Mundo*, 54 by *El Confidencial*, 27 by *El País* and 6 by *eldiario.es*), and from 28 columns signed by eight specialists (22 in *eldiario.es* and 6 in *El País*). These leading figures are the following 27 scientists and healthcare specialists:

**Table 1:** Male/female scientists in the news items included in our sample.

| Male/female scientist | Post   |
|-----------------------|--|
| Javier Arranz         | Epidemiologist. Spokesperson of the Regional Committee of Infectious Disease Management of the Balearic Islands  |
| María Blasco          | Molecular biologist. Manager of the Spanish National Cancer Research Centre  |
| Francisco Bolumar     | Professor of Epidemiology and Public Health of the Universidad de Alcalá. Affiliated Professor of Epidemiology of the City University of New York  |
| Albert Bosch          | Microbiologist. The Spanish Virology Society President   |
| Inmaculada Casas      | Virologist. Manager of the Spanish National Influenza Centre of the WHO in Madrid and Head of the Reference Laboratory of Respiratory viruses and Influenza of the Spanish National Microbiology Centre of the Carlos III Health Institute |
| Bonaventura Clotet    | Head of the Infectious Diseases Service of the Germans Trias i Pujol Hospital in Badalona, Head of the AIDS Research Institute of IrsiCaixa and President of the Foundation to Fight Against AIDS and Infectious Diseases                  |
| Margarita del Val     | Spanish chemist, virologist and immunologist. Science researcher of the Spanish National Research Council and of the Severo Ochoa Centre of Molecular Biology  |

<sup>2</sup> Between March and June 2020, and according to Comscore, *ElMundo.es* occupied the first, second and third positions as the most widely disseminated newspaper (approx. 27 million single visits); *ElPaís.com* occupied the third, fourth and six positions (26 million); *ElConfidencial.com* was the fifth and seventh most read newspaper (21.5); and *eldiario.es* came in eighth and ninth positions (15.8).

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|                             |  |
|-----------------------------|--|
| Pedro Gullón                | Social epidemiologist and doctor specialising in preventive medicine and public health   |
| Miguel A. Hernan            | Doctor and epidemiologist. Professor of Biostatistics and Epidemiology at the Harvard T.H. Chan School of Public Health  |
| Ildelfonso Hernández        | Epidemiologist. Spokesperson of the Spanish Society of Public Health and Healthcare Administration   |
| Alberto Infante             | (Emeritus) teacher of international health at ENS/ISCIII. Former General Manager of the Agency of Quality and Professional Planning and National Health System Inspectorate (2006-2010)                      |
| Daniel López Acuña          | Epidemiologist. Former WHO Manager of healthcare action in crisis situations   |
| José Martínez Olmos         | Teacher at the Andalusian Public Health School in Granada. Former Health Secretary General for 2005-2011   |
| Rafael Matesanz             | Nephrologist. Head of the Nephrology Section of the University Ramón y Cajal Hospital in Madrid  |
| Oriol Mitjà                 | Researcher doctor specialised in internal medicine and infectious diseases. Coordinator of the Experts Report on the deconfinement plan of the Generalitat Catalana and consultant of the Andorra Government |
| Santiago Moreno             | Head of the Infectious Diseases Service of the University Ramón y Cajal Hospital   |
| Teresa Moreno               | Nurse. Head of the Research Unit in Health Care and Services (INVESTEN-ISCIII) of the Carlos III Health Institute and consultant of the COVID-19 Scientific Committee  |
| Raúl Ortiz de Lejarazu      | Virologist. Consultant of the Spanish National Influenza Centre  |
| Miquel Porta                | Epidemiologist, and expert in preventive medicine and public health. Researcher at the Hospital de Mar Medical Research Institute (IMIM)   |
| Agustín Portela             | Doctor from the Spanish Agency of Medicines and Health Products (AEMPS), an expert in managing procedures and approving vaccines, and consultant of the European Medicines Agency (EMA)                      |
| Fernando Rodríguez Artalejo | Epidemiologist. Head of the Department of Preventive Medicine and Public Health at the Universidad Autónoma de Madrid and the Coordinator of the Cardiovascular and Nutritional Epidemiology Group of CIBER  |
| César Serrano               | Oncologist and Principal Investigator of the Translational Sarcomas Research Group of the Vall d'Hebron Cancer Institute (VHIO)  |
| Fernando Simón              | Epidemiologist. Manager since 2012 of the Spanish Coordination Centre for Health Alerts and Emergences of the Spanish Ministry of Health for managing the pandemic   |
| Alex Soriano                | Head of the Infectious Diseases Service of the Clinical Hospital of Barcelona  |
| Antoni Trilla               | Epidemiologist and consultant of the Spanish Government, appointed for the COVID-19 pandemic   |
| Hermelinda Vanaclocha       | General Submanager of Epidemiology, Health and Environmental Health Monitoring of the Generalitat Valenciana (Valencian Regional Government)   |
| Joan Ramon Villalbi         | President of the Spanish Society of Public Health and Healthcare Administration (SESPAS)   |

Source: Own elaboration.

After our selection, we went on to look at contents using an Excel analysis table with both quantitative and qualitative variables, which were applied to textual and graphical elements to statistically process them (Piñeiro-Naval, 2020, p. 3). For the quantitative aspects, this table included the following analysis categories: the male/female scientist who was the leading figure of, or acted as the expert voice in, the news item; the media that published the news item; the day and month it was published, the section it appeared in, the authorship of the informative piece, the journalistic genre it belonged to, if the leading figure appeared in its headline or not and the place (s)he occupied in the sentence, the number of words the work included, the number of remarks received, the URL access and the presence of graphic elements. If there were graphic resources, the main person featured in the image was identified, as was the type of shot, where the image was located, the main figure's clothing and where (s)he was looking (forward or to one side).

The Excel table included the following qualitative categories: the leading figure's attitude (active or reactive to facts or previous remarks), the theme, the intention, and the objective of the information. If there was an image, the facial expression shown to the camera was noted. Facial gestures are a primary source to communicate basic emotions and intentions (Ekman, 1982, 1993; Ekman & Rosenberg, 2005; Ceberio & Rodríguez, 2007). Finally, in order to make out how these individuals felt, we coded 12 emotional expressions as our study progressed, which included the six universally basic accepted ones, namely happiness, surprise, fear, displeasure, rage and sadness, as well as tiredness, trust, doubt, emotion, concern, caution, wisdom, serenity and seriousness.

Lastly, we carried out a discourse analysis that employed the mass media to portray these new leaders when they reflected about how this health and economic crisis progressed.

### **3. Results**

This research work about the presence of different benchmark scientists who appeared in the four digital newspapers for 5 months and 9 days revealed that the information linked with scientists (n=144 pieces) was covered practically on a daily basis. Mentions peaked (n=166) in April (n=48) when the population was generally confined at home. Most mentions appeared for *El Mundo* (39.7%), followed by *El Confidencial* (37.9%), *El País* (18.6%) and *eldiario.es* (3.6%).

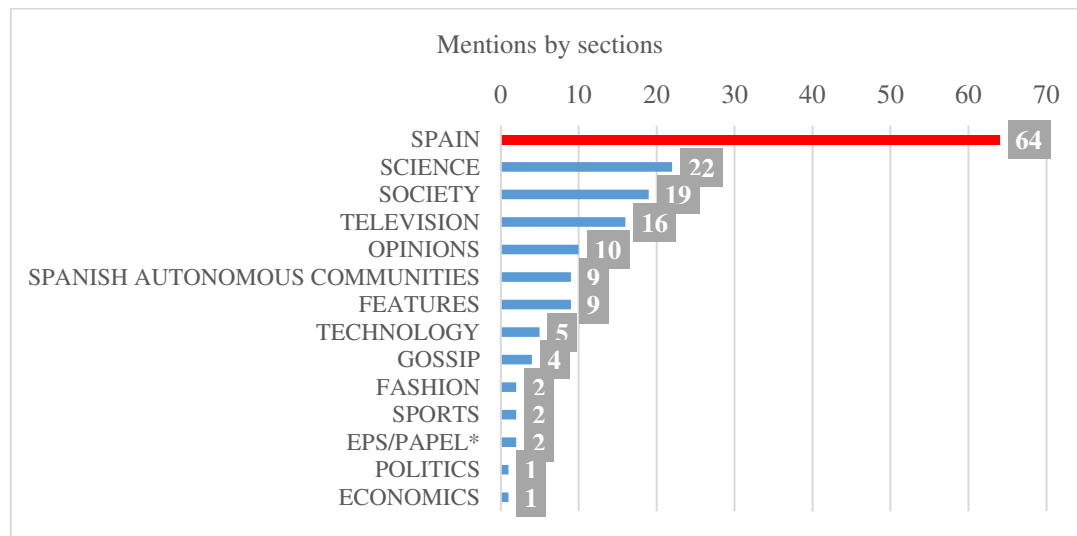
At this point, the most outstanding section was that which included most of the analysed statements made by the benchmark scientists with four in every ten mentions found at the highest level of their hierarchical order in 'Spain'<sup>3</sup> (n=64), as opposed to the usual Science section (n=22) where they normally appeared until that time. Nonetheless, the varied rigmarole formed by the other sections (Graph 1), including Society (16), Television (14), Opinions (10), Features (9), Technology<sup>4</sup> (7) and Gossip (5), proved how relevant the treatment of male/female scientists' moral, psychological and physical features was in these pieces.

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<sup>3</sup> *eldiario.es* was the only one of the four newspapers to not contemplate this in its section's menu.

<sup>4</sup> The variable 'Technology' includes the sections Technology (at *El Confidencial* and *eldiario.es*) and F5 (in *El Mundo*).

**Graph 1:** Mentions per section.



Source: Own elaboration. [\* = names of supplements]

Indeed, if we look closely at the newspapers, both *El Confidencial* (n=41) and *El Mundo* (n=23) gave precedence to the scientific voices in the Spain section, while the section in *El País* where more mentions appeared was the Society section (15). With *eldiario.es*, information about scientists was distributed into Opinions (2), Politics (1), Society (1), Technology (1) and Spanish Autonomous Communities (1); it had published the most opinion columns signed by scientists and had given them the chance to write their own evaluative texts without being affected by journalists' mediatisation.

Of the scientific voices identified in these newspapers, that of Fernando Simón appeared in 67% of the found mentions (Table 1). During the study period, Simón was the Spanish government's daily spokesperson as far as pandemic management was concerned, which would explain his outstanding presence, compared to the second most cited scientist, Oriol Mitjà (11%), who greatly criticised the Spanish Government's management and researched the therapeutic strategy with hydroxychloroquine as a method to prevent the disease, which failed in the end. The third person to follow them (3%) was Antoni Trilla, a government consultant who was followed by Bonaventura Clotet, a critic of the Spanish government's management. Thus, during this period, the most mentioned voices had adopted relevant decision, making power about the measures to be taken. Of the 24 voices by journalists mentioned as a source, only four were women.

The informative genre predominated in scientists' coverage during the pandemic. Six in every ten items that included statements made by a scientific specialist were news (n=99), whose role in such cases was to point out the science status and knowledge about coronavirus, along with scientifically rigorous information on prevention measures and diagnostics. Here the first ones to draw the mass media's attention were Oriol Mitjà and Antoni Trilla, who respectively supported and opposed the Mobile World Congress being cancelled in Barcelona.

Secondly, interpretative treatment is stressed based on features (n=24), interviews (=14), biographical sketches (=16) and reports (=2), in which the scientist portrayed as a person and the analysis of his/her role in the pandemic crisis were the most appealing parts. They focused on his/her personality, which often clashed with that of the predominating politics until that time in the testimonies that their pages featured. This is what Pablo Linde, a journalist from *El País*, wrote in a biographical sketch about Fernando Simón on 9 March (<https://links.uv.es/2ldSwj9>):



You can tell he is no politician a mile away. He has no prepared discourses and does not use set phrases. He answers every question quite plainly. He often states that over the years he has never been told what to say. He sometimes says more than he ought to. However, he avoids leaving questions unanswered or not attending those journalists who raise their hands.

Finally, we found 11 columns, of which three were satirical, in which journalists freely satirised the portrait of one scientist, Fernando Simón, and his overwhelming presence in the pandemic context. On 24 May, Carlos Prieto wrote in his ‘Pandemic Diary’ in *El Confidencial* about the future he predicted for him:

Now that making forecasts is riskier than ‘balconing’, I’m going to jump off a balcony in Magaluf into a swimming pool. The future is written as follows: [...] The Government opens beaches. Simón takes a dip and disappears out of thin air. Six months later, he reappears secretly in China, in the Shaolin Temple, with a new identity. Only he knows his identity. Two years later: ‘Ok Diario’ finds him and publishes some photos of Simón up a tree sat in the Lotus position. Nationwide commotion. Simón gives a press conference surrounded by monks [...] Spain is divided into Simonists and anti-Simonists. Maximum polarisation.

The intention of the items about which these benchmark scientists spoke was, for 42.2% of the cases (n=70), criticising how the pandemic was being managed in Spain. These voices mostly appeared in *El Confidencial* (n=34) and *El Mundo* (n=24). Critical mentions peaked at precisely the same time when the COVID-19 death curve peaked, and the scientist who featured mostly in relation to them was Fernando Simón (n=37). At times, his colleagues formulated these mentions given the bipolar criteria for management. One such case was Oriol Mitjà, who responded in *El Confidencial* on 28 March:

We are facing a healthcare crisis never known before and we need to find urgent solutions. We are working against the clock. What some professionals like Miquel Porta or others cannot do is to politicise the situation and tell us not to be critical with the government. I don’t care about governments.

Explanatory items were also relevant because they frequently appeared (n=49; 29.5%), which is one of the features that singles out the scientific power discourse from the rest. Most cases appeared in *El Mundo* (n=24) and *El Confidencial* (n=20). Against the majority reproach, 10.2% (n=17) were justified by the taken measures, and a considerable number was found in *El País* (n=10), while 9.6% were mentions of praise, mainly in *El Confidencial* and *El Mundo*. In this last-cited newspaper, Laura G. Ibañes wrote:

Cautiously, calmly and didactically, Simón has remained at the forefront of the Coordination Centre for Health Alerts and Emergences with governments of all types. He never formally gives opinions about politics when the press is around, but he never leaves any questions unanswered.

Of the 166 obtained mentions, this benchmark scientist is the leading person in a news item and the main source in 131; on 29 occasions, he was consulted as a secondary source as an expert in the theme and he appeared collaterally in the remaining six in news items with many voices. If we analyse the pieces in which scientists appeared (n=144), we observe that on 36.8% occasions they were subject to the headline but were the object in 29.2%; hence, we can state that they lie at the centre of a media piece for both the proactive actions they perform and the reactions they produce. In 12 of these pieces, barely 8.3% made a personal citation in the central piece, unlike political journalism based essentially on statements that lacks any analysis (Casero-Ripollés, 2012).

Regarding length<sup>5</sup>, we found that pieces included a mean of 905 words, and the longest piece, which stood out from them all, was the report of *El País ICON* (<https://links.uv.es/9rOhv1H>) with 4,629 words, about the faces most featured by the media in relation to COVID-19. The first of the 16 photographs to be stressed was that of scientist Fernando Simón. That report was followed by another report with 3,498 words about the “Simón phenomenon” in *El País Semanal* (<https://links.uv.es/4UoLfm5>), a personalist approach to the day-to-day life of “the expert, the non-politician, the intruder who had just taken on a fundamental role in the already evident crisis and its consequences.”

All the journalists who signed these analysed pieces came to 122, except for 15 pieces of information from agencies and 10 unidentified ones. Of the male/female professionals who produced the most pieces, there were specialists in Health sections, like Jessica Mouzo (n=8) from *El País* of Catalonia, Laura G. Ibañes (n=5) in *El Mundo*, and Pablo Linde (n=4) from *El País*. Nonetheless, the most productive professionals included Marcos Lamelas (n=6), a journalist from the Economic section in *El Confidencial* of Catalonia, Xabier Miguelez (n=5), Head of the Television section in *El Confidencial*, and Nayin Costas (n=5), the Editor of the Television section in *El Confidencial*.

When we examined readers’ reactions to items with published remarks, we found that, once again, Fernando Simón took the lead by and appeared in 76.9% of the 13 pieces that produced most readers’ reactions (from 301 to 1,258). The most debated piece about this scientist was published by *El Mundo* on 14 March, precisely when the pandemic had to be urgently tackled, which pointed out that the “European Union did not recommend ‘crowds’ forming 6 days before 8 March (International Women’s Day) to avoid coronavirus from spreading” (<https://links.uv.es/F5Swqej>). Even so when examining absolute numbers, the most commented piece of the 144 registered ones was featured mainly by another scientist, Oriol Mitjà, about whom *El País* published the headline “The coronavirus epidemic could have been avoided” (<https://links.uv.es/ui2r1O1>) on 17 March 2020. Therefore, at this point we must go back to the start of the pandemic in Spain, when citizens were anxious and verified in these pieces of information that both the forecasts and prevention were not the Executive’s characteristic measures. Although the aim of this analysis was to know which scientist significantly caused, by quantitative values, the biggest reaction in this participative section for readers, we are aware of the bias involved when we took this sample as our basis. The obligation of registering in the mass media to be able to publish a remark, the media’s filtering, and the various platforms and social networks that also allow reactions to a piece of journalistic work to be expressed, did not enable us to evaluate the majority of reactions.

### 3.1. *The image of scientific power*

All except one occasion, the analysed pieces included at least one graphic element which, in 77.8% of cases, was a photograph (n=112). The main featured person to appear in just over half of the photographs (n=77) was a scientist, while the remaining photographs illustrated shots of society at that time or timeless shots (n=16), politicians (n=14) or a scientist appearing with a politician (n=16). This last case evidenced the close link between benchmark scientists with government management as they occupied administration management posts or were government consultants.

At this point, we examined which formats represented scientists. Their photograph (n=55) in medium shots (n=39) and close-ups (n=34) was the main option of the press photographers from the studied newspapers and were personalist pieces that focused on their individualised role in the uncertainty context. Our analysis of their facial expressions showed that in 42.9% of cases, their face, particularly their look, transmitted serenity. This

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<sup>5</sup> We recorded the number of words making up news items, except for headlines, introductory headings, subtitles, signatures, and dates.

attitude, as we pointed out in the Methodology, must be taken as a value because they were unable to disassociate themselves from the influence of a context filled with fear and lack of knowledge. The requirements for this attitude included displaying a calm look, without creasing the lifelines around their eyes, nor the creases around their mouths.

Fernando Simón has shown up to 11 different expressions of the 12 recorded as variables, although serenity (n=34) and concern (n=15) predominated. We were unable to attribute the “emotion” category to him, but we could to the second most expressive scientist, Oriol Mitjà (<https://links.uv.es/1rzMjie>). Expressions showing concern, formed by the space between eyebrows and the lifelines under noses tightening, appeared in two of the 10 pieces. They reinforce the feeling of seriousness shown towards either pandemic data or the means that the State adopted.

**Image 1:** An example of the facial expressions shown by benchmark scientists during the pandemic in four newspapers.



Source: Own elaboration.

One scientist, Fernando Simón, was featured much more graphically in accordance with the range of interpretative and informative pieces written about him. We included 15 videos, which mostly summarised his daily appearances during press conferences given from the Spanish Ministry of Health, in which his tone of voice and gestures led to television parodies being played by comedians like Carlos Latre or Los Morancos; these satirical comedians emphasised his natural way of coughing, laughing, swallowing the wrong way or being sincere. We also found two vectorial illustrations which digitally exaggerated his serenity and his particular bushy eyebrows, where he comes over as a colour-saturated pop star. We also stress a meme taken from a video edited by YouTuber Christian Flores. This montage is filled with loving emoticons and signs: “I want to go to Parliament and give you a kiss, but I’d never do that to you. I take your advice seriously” (<https://links.uv.es/a7BlTue>). The Simón phenomenon represented careless aesthetics and a way of acting frankly that particularly stimulated more left-wing newspapers.

**Image 2:** Illustrations of Fernando Simón published in *El País* (<https://links.uv.es/AMd38G1>) and in *El Confidencial* (<https://links.uv.es/1VPK1fh>).



Source: *El País* and *El Confidencial*

We even analysed the clothing of those scientists who worked in public institutions, especially Fernando Simón, as opposed to the suits that the political class tends to wear. In fact, a male/female scientist wearing informal clothing was the leading person featured in 91.8% of the main images of pieces, except for two in which a lab coat was worn and a suit was worn in two. The analysis of them appearing even led to reveal the chromatic scale of their clothing. On this matter, Begoña López wrote in *El País* (<https://links.uv.es/F5tvTsF>):

Until then, all his mid-season clothing became famous: the grey zip-up cardigan, the lightweight knitted beige one also with a zip, and the two crew necked jumpers, a navy blue, and a light green one. [...] a form of anti-fashion with an instantly calming effect.

Finally in this section, we paid special attention to the new scientific star system published in *El Mundo* (<https://links.uv.es/yGmTV8Z>), which took us back to Goya's painting *The Spell* or *Witches* for its grotesque dramatic quality. These characters hidden away in the dark and their eyes bulging with surprise from what they see seemed to find the necessary potion for an unknown situation. The enigma that they awoke to was interpreted in the gloom. Moreover, in the same painting they came over as special beings in a spiritual white sky and were taken as superheroes far removed from our considerable incapacity evidenced by this pandemic.

**Image 3:** Illustration of Guillermo Serrano where the new political class took us back to Goya's painting *The Spell*.



Source: *El Mundo*.

### 3.2. *Scientists' judgement*

Opinions was the fifth section where we most frequently found mentions to these benchmark scientists; to be exact, it was only Fernando Simón who motivated these columns: *El Confidencial* (n=4), *El Mundo* (n=2), *eldiario.es* (n=2) and *El País* (n=2). The cause of these texts was the commotion that this scientist's features caused, which are so distinct from those of the conventional power benchmarks until that time. The male/female journalists who applauded the new model wrote in *El País* and *eldiario.es*. Ana Requena, Chief Editor of Equality at *eldiario.es*, underlined that he brought life to the "new masculinity" (<https://links.uv.es/KWgPCB1>):

One factor has helped to make Simón's features more surprising and pleasing: him contrasting with the figures of authority who participated in daily press conferences in the first weeks. Those in charge of the National Police Force, the Civil Guard and Armed Forces appeared next to this expert every day and performed the classic example of masculinity and authority. Their faces were serious, almost artificial, sometimes annoyed, and they talked in haughty tones, and used sentences and non-verbal expression that were harsh.

However, the same values that some extolled were discredited by other journalists, like those from *El Confidencial*. This was the case of José Antonio Zarzalejos (<https://links.uv.es/oeP31cB>), who sustained that "his credibility was not proper" because, among other reasons, "using sickly sweet language that is approximate and esepulative, using the adverb 'obviously' and the linking phrase 'it is also true' that he unbearably repeats." Antonio Casado spoke less harshly of the scientist (<https://links.uv.es/bWYc6Mp>), who believed that this type of roles, such as a spokesperson, was for politics because "citizens have unduly associated his image with that of someone responsible for managing this crisis."

We analysed the seriousness of the "hate" that Simón produced, as Isaac Rosa ironised (<https://links.uv.es/UN5oPoU>) in the longest column of them all, who mentioned the untenable arguments of those who criticised him. This was opposed by the parodic attitude of the two columns in *El Mundo*, signed in LOC and in the Diostuitero ("God tweet user") column, which essentially focused on the way he physically looked: "Any day now we will see Fernando Simón walking on water. Or worse still, erect as the leader of the white walkers, heading an army to conquer the West."

Did scientists sign these columns? In both *eldiario.es* (=22) and *El País* (n=6), columns were signed by eight specialists, of whom only two were women, Margarita del Val and María Blasco. Once again, as we found in previous pieces, the media made female scientists invisible.

The most proliferous in publishing own texts were Alberto Infante, Daniel López Acuña and José Martínez Olmos, who signed 22 columns, which were mostly signed by all three in the Open Platform section of *eldiario.es*; in other words, 73% of all those studied. These works were published since February (n=1) but became most important in April (n=9) and May (n=7), with preventive intentionality as regards the measures to be taken during deconfinement. Their graphic part no longer centred on the personalised scientist figure, but on the resources that illustrated various aspects of society (medical centres, thoroughfares, businesses). They took a proactive attitude of anticipating events and most (n=21) directly appealed to governmental and regional authorities. They were argumentative texts that contained more than 1,000 words. Their purpose is defined below (<https://links.uv.es/yfGXh4g>):

The achievements met to date with confinement and personal protection measures have slowed down the first viral attack, avoided the health system from collapsing and saved many lives. To defeat it and avoid it reappearing during deconfinement, from this time onwards it will be necessary to adopt much more focalised and selective strategies. The sooner they start, the better.

For the purpose of anticipating events, José Martínez Olmos signed his first column on 4 February, which urged the World Health Organisation (WHO) to act as a reference organisation in managing this new disease.

The columns written by scientists in *El País* (n=6) appeared in the Society (n=3), Science (n=2) and Economics (n=1) sections. Oriol Mitjà signed the first two published between 13 and 29 February. In them, he gave reasons why it was necessary to cancel the Mobile World Congress (<https://links.uv.es/GV1jLTC>), and urged the authorities to put the population to the test and to take social distancing measures (<https://links.uv.es/siYoyKv>). As part of exercising democratic responsibility, the scientists who wrote in *El País*, like those who wrote in *eldiario.es*, informed readers about the progress made in the research conducted to know the keys of COVID-19 with an expository, simple and clear style.

These pieces were eminently textual, and their conclusions shared a common point. They appealed to a generalised group and not only to the authorities making decisions, involved the whole group. Apart from providing data, they summoned prevention, moderation and research values: “We have learned some things. One of the most important things is that science and scientists work and answer very quickly. This is something that must be boosted in our country and the world,” María Blasco outlined (<https://links.uv.es/78HhIUv>).

#### **4. Discussion and Conclusions**

Science implies knowledge, but also hypotheses, uncertainty, the ambivalence of views and sincere discourses when such information is lacking. This attitude is incompatible with the “excess positivity” (Byung-Chul Han, 2020) of the capitalist society, a society that seeks accuracy and performance.

However, if we recover the “sinister historic age” of W.J. T. Mitchell (2019), this shock for our planet led public opinion to lean towards technicians. Society, and the mass media which forms part of it, sought explanations for this viral phenomenon in science, without resorting to alarmism and cover-ups, which sometimes characterise the political class. Theories about conspiracy and sheer bad luck, and that about incompetence, require arguments based on scientific research to be backed.

In this risk environment, a new group until that time moved from the Science section and became a primary source. In light of the results that we analysed in the previous section, we can state that our hypothesis was validated, which considered that the mediatisation of scientists as new society leaders in relation to the pandemic would lead to messages of serenity and rigor being offered, which would reduce uncertainty.

With coverage on almost a daily basis, not only did they become the usual sources of journalist information but were also the main features most of the time. They occupied the Spain/National section, where they informed about the SARS-CoV-2 scientific knowledge status, and the disease it caused to humans, where they argued with scientific rigor about prevention and diagnostic measures, despite there being diverse criteria, and where “they left no questions unanswered.” The information they caused, or that which they reacted to, was expressed by means of basically explanatory and justifiable texts. These pieces were far removed from the critic-type weakness of “journalism of statements” (Dader, 2012) which had, until that time, characterised the main section of the four digital newspapers. The objective of most analysed pieces was the fundamental political role played by journalism which, according to Merritt and McCombs (2004, p. 8), consisted in “creating a shared sense of relevance about which people may base their answers on to the central question of democracy: what must we do?” in a pandemic situation.

At this point, it would be worthwhile studying whether this informative and interpretative processing, which has allowed scientists’ arguments to be voiced, has been influenced by the fact that the male/female journalists who signed pieces were mostly

specialists in science; thus, they would have also moved towards a more thorough and argumentative writing procedure.

The sudden appearance of a star system implied scrupulous analyses, and with all their variants, of the figures that shaped it who, in this case, were specialists in basic medicine and healthcare. This physical, psychic, and even ideological, examination also included editors from the four digital newspapers from very different sections, like Technology, Television, and Gossip. That is, beyond the content of their discourse, they used a large number of their pieces to profoundly look at the image and disposition of these new benchmarks. “Quite suddenly, many people discovered that scientists actually had voices and faces. They knew how to explain themselves and helped them to understand that science was behind such important decisions,” stressed Gema Revuelta in *El Mundo* in one analysed piece (<https://links.uv.es/yGmTV8Z>). Apart from the way they expressed themselves, they caught people’s attention by the particular way they looked, how they presented themselves in public and the way they acted.

In graphical content terms, this meant that scientists’ personalist image exceeded the prominence of tables and graphs. With close-ups and medium shots, certain figures came to the forefront, whose facial expressions and presentations were generally frank. The attraction that these new leaders portrayed when explaining the risk made them mysterious beings, superheroes, or even pop stars.

When wondering about the attitude that the four newspapers took to the provided explanations, we conclude that their intentionality was critical, especially with the more right-wing newspapers, but also when ineffectiveness or silence were evidenced in insecurity contexts, which also made readers indignant. Thus, the more left-wing newspapers tended to present justifiable and praiseworthy pieces. The most cited scientists were those linked with executive, state and/or regional power.

In fact, being continuously overexposed, and this link with governments making controversial decisions, influenced the public opinion’s image of scientists with time, disassociated them from their knowledge, and was quickly identified with political power. This was what we observed with Fernando Simón, who was mostly rejected by right-wingers, but applauded by left-wingers.

Another point still to be studied is lack of equality of the new benchmarks who were invited to speak, with only four women among the 24 specialists, as mentioned above. The reasons for studying such inequality are: if it responds to the excess immediacy that has relaxed the deontological commitment from the gender perspective; if it covers scientists’ greater availability and willingness; or if the reason is because the hierarchy in scientific institutions is mostly occupied by men.

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