Science Represented in Newspapers in the Constitutional Monarchy and the 1st Republic. A Study in Faial Island, the Azores, Portugal

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DOI: https://doi.org/10.36941/jesr-2021-0005

Abstract

This study aims to apprehend the representations of science published in two local newspapers (O Faialense and O Telégrafo) published in the periphery of Portugal (Faial Island, the Azores), in the last quarter of the 19th and early 20th century. For this purpose, the authors carried out a thematic and qualitative analysis of the news collected in these two newspapers. Results allow concluding that, while Positivism is considered one of the main currents of thought justifying the rise of the republican logic, which culminated in the revolution that deposed the constitutional monarchy regime and implemented the republican regime in 1910 in Portugal, the research carried out shows a growing appreciation and visibility of the importance ascribed to both science and technology, without, however, any explicit association with political ideologies. This may be due to the type of search carried out and the editorial lines of the two newspapers, as well as – or also – to their peripheral geographical location concerning the propagation of these ideas.

Keywords: science representation newspaper, positivism, technology, constitutional monarchy, first republic, Portugal

1. Introduction

The analysis of material on science and technology published in newspapers is of particular importance as it provides clues on how science is considered, appropriated and represented through the most diverse types of publications (such as news, comments and announcements). These may differ to a greater or lesser extent regarding both content and the neutrality expected of scientific knowledge (Maia & Sá, 2020; Mergoupi-Savaidou, Papanelopoulou, & Tzokas, 2012; Cordeiro & Silva, 2009a, 2009b; Christidou, Dimopoulos, & Koulaidis, 2004; Massarani & Buys, 2007; Jarman, McClune, Pyle, & Braband, 2012). In particular, as Mergoupi-Savaidou et al. (2012) state, “the examination of the various ways in which science entered the daily press in European peripheries in the late nineteenth and early twentieth centuries can bring the history of science closer to political history” (p. 296).
This type of publication can even function as a means of social and political struggle (Cordeiro & Silva, 2009a) and, to a certain extent, simultaneously as a “voice and construction of public opinion” (Cordeiro & Silva, 2009b, p. 16).

However, this process is not unambiguous. As Cordeiro and Silva (2009b) argue, “While the press can be considered a kind of portrait of the society in which it operates, it is also, at the same time, an engine of progress and development” (p. 9).

Although the relationship between Sociology and History can be fruitful, allowing a better long-term understanding (Au, 2017; Silva, 2013), in the specific case of the analysis of the relationship over time between science and media, there is a need for deepening (Carvalho, Massarani, & Seixas, 2015; Cordeiro & Silva, 2009a, 2009b).

In an attempt to contribute to this achievement, the research that this paper reports on – which seeks to understand whether Positivist thinking, considered to be one of the main currents of thought justifying the rise of republican logic in Portugal, has taken on growing visibility as a political and/or social ideology – offers a justification for it, starting by focusing the perceptions of science on two peripheral newspapers (in a period roughly between 1857 and 1910 – the date of the deposition of the constitutional monarchy regime and implementation of the republican regime on October 10, 1910, in Portugal) (Costa, 2011). For this purpose, after a brief elucidation, based on Sociology, of the perceptions of science in newspapers, the presentation of the methodology mobilized in this research follows. The paper ends with the presentation and discussion of the results obtained and conclusions drawn.

2. Sociology and Representations of Science in Newspapers


In the social legitimation of scientific knowledge (Estrada, 2016; Ágoas, 2017), the way it is incorporated, popularized and mobilized by society (Júnior, Souza, Parisotto, & Palmisano, 2016; Mergoupi-Savaidou et al., 2012; Jedlikowska, 2016; Massarani & Buys, 2007) is crucial in understanding this process.

However, dissemination or, at least, information on scientific matters is neither unambiguous nor automatic (Júnior et al., 2016) for several reasons. These include, on the one hand, the fact that the media are selective in their choice and how they disseminate, and, on the other hand, the fact that these media exert different types of influence on public opinion (Medeiros, Ramalho, & Massarani, 2010; Kale-Lostuvali, 2016; Cavaca, Vasconcellos-Silva, Ferreira, & Nunes, 2015). Furthermore, the information is differently incorporated by readers according to their characteristics, including social traits. Keller (2011) argues that “Discourses do not speak for themselves, but are rather first ‘brought to life’ in historically situated processes of interaction and institution building by social actors, and their communication (inter-)acts within pre-existing social fields of practice and institutional structures” (p. 64).

Interests of various kinds (economic, political and social, among others) then influence the production and (re)interpretation of the media, since readers are not mere receivers of information (Mergoupi-Savaidou et al., 2012). The media are not neutral and, as Cavaca et al. (2015) state, “[…] the media is an institution delimited by its own sphere of legitimacy in defining, imposing and defending a certain hierarchy of values” (p. 3570).

3. Methods

In this analysis of the representations on science promoted in two local newspapers in a very specific geographical context – Faial island, the Azores, located in Portugal (Macedo, 1887/1981) –, the local periodicals *O Fayalense* (weekly, from 01/04/1857 to 20/01/1895) and *O Telégrafo* (daily, from 16/04/1904 to 21-06-2004) were consulted at the National Library, according to the dates available for continued
direct consultation. Given that the original purpose of the consultation was the study of *Asilo de Infância Desvalida da Horta*, Faial island (Serpa, 2013), the consultation covered two time periods: Between December 5 and January 15 (the time span covering both the anniversary of the inauguration of the Asylum as a privileged moment when the organization celebrates on the Asylum Anniversary Day – which takes place on the day of the Holy Innocents for the Catholic Church – and Christmas, which could be a privileged moment for the relationship of the Asylum with the local community) and between April 15 and July 15 (covering the following moments: the opening of the Asylum as a local community and the festivity of Santo António). This fact, added to a certain replication of publications from other newspapers, without a deep contextualization of the contexts and risks of science (Carvalho et al., 2015), is a clear limitation of the study, entailing the need to deepen this exploratory study.

From this selection of articles directly and explicitly related to scientific knowledge, the authors carried out a qualitative thematic analysis (Cárdenas, 2010; Carvalho et al., 2015) based on the “segmentation of text sub-images and text extraction, preprocessing and representation, induced topic extraction and representation, and document viewing and retrieval interface” (Maia & Sá, 2020, p. 1). This analysis focused on the following selection criteria: theme (science or technology), specific subject, prominence (position on the page), orientation (positive, negative or neutral); type of information (announcement, information, opinion/comment) and local, national or international reference.

4. Science Represented in Newspapers in the Constitutional Monarchy and the 1st Republic

The two newspapers analysed (*O Faialense* and *O Telégrafo*) (the spelling has been updated) were published in Faial island, the Azores Archipelago, in Portugal. At that time, the number of inhabitants of Faial island ranged roughly between 22,000 and 26,000 (Matos & Silva, 2008). Despite a very high illiteracy rate (Tavares, Carneiro, Diogo, & Simões, 2009; Cordeiro & Silva, 2009b; João, 2008), numerous newspapers emerged in the city of Horta, albeit many of them were short-lived (Lobão, 2009; Lima, 2005). Newspapers have also flourished at this time as vehicles for dissemination and ideological promotion (Lobão, 2009; Cordeiro & Silva, 2009b; Leite, 2008; Lima, 2005).

The following are some of the results obtained.

Regarding the social and cultural positioning of the Azores archipelago, João (2008) comments that,

Contrary to what is commonly said, the Azores were not isolated from the rest of the world and were even an almost imperative stopping place for those crossing the Atlantic [...]. Not only were the main islands regularly visited by ships from various regions of the world, but Azoreans also moved relatively easily to other stops. Thus, the new ideas and cultural currents of the 19th century arrived in the Azores at a pace very close to that of the mainland (p. 121).

COCA WINE
STIMULATING AND RESTORATIVE
PREPARED BY DR. DELOR, FROM PARIS
Prescribed by all doctors to cure and combat rickets [...]

![COCA WINE Advertisements](image)

**Figure 1.** Ads that are legitimate in scientific knowledge
Source: *O Faialense*, Year 35, No. 21, January 17, 1892, p. 3.
Tavares et al. (2009) show that, over the last decades of the 19th century, the image of the power of science and technology in public space had its exponent with the Universal Exhibition in Paris in 1900. Massarani and Buys, in their 2007 study, analyze the publication of a large number of reports in Latin American journals of the time on topics related to science and technology. In their 2004 study, Massarani and Buys had found that medical and health issues were the main topics in most of the journals analyzed, although with considerable variations in numbers among the publications examined. The findings of their studies also point towards a considerable difference in the references that newspapers make to national science and technology, although they also have space in newspapers. Finally, the authors identified in the journals a relevant number of articles highlighting the benefits of science, which involves a utilitarian use of science, namely by presenting a positive image of it (Massarani et al., 2004, 2007).

As early as 1860, *O Faialense* made direct reference to scientism. Its report “On the essays of a locomotive” attests to this: “Nowadays, useful inventions easily pass to the universal domain; it would neither be profitable nor pleasant for the productions of human understanding to be restricted to a limited number of men” (*O Faialense*, Vol. 3, no. 42, May 13, 1860, p. 4). On the subject of “steam ploughing”, *O Faialense*, year 7, no. 10, in its edition of October 11, 1863 (pp. 3 and 4), praises this “agricultural progress”.

The second newspaper under analysis in this paper, *O Telégrafo*, in its edition of August 29, 1904, announces the inauguration, in Philadelphia, USA, of “The world’s largest watch [...] A watch the size of a house and which is wound up every day by steam is all there is to it in modern style” (*O Telégrafo*, year 12, October 21, 1904, no. 3252, p. 1).

In its edition of August 29, 1904, the same newspaper refers to “[...] electric lighting, the plumbing of water [...]”, which are considered necessary improvements (*O Telégrafo*, year 12, August 29, 1904, p. 3206).

Regarding the advances in medicine at this time worldwide, *O Telégrafo* reports, on July 19, 1905, what it called “The triumph of surgery”:

> While medicine is going through a period of doubt and disbelief, while the pharmacy, by multiplying the elixirs, is not able to take credit for itself as a servant of practical and positive science, surgery is sharpening the scalpels with more confidence, secured by the rigor of the antiseptic before cutting and by the scruple of aseptic after its work [...]. Recently, a rich American who, in an accident, had his ear torn off, found a compatriot who sold him one of his ears for 25,000 francs, to which he was wonderfully welded [...]. The noses are also corrected by artificial means, using mainly subcutaneous injections of Vaseline (*O Telégrafo*, year 13, no. 3465, July 19, 1905, p. 1).

The political regime at the time – the Monarchy and the Constitutional Monarchy – had experienced many and growing difficulties. The shift from a Monarchy to a Republic was the culmination of a multifaceted crisis, characterized by several uncertainties and by various critical political, economic and social contexts (Pires, 2017; Martín, 2005), but also by the relationship with the press. As Sardica (2012) indicates,

> To be king at the time when Charles was king (1889-1908), with the responsibilities that the political culture of liberalism and the letter of the Constitutional Charter demanded of the monarchs, and in the face of the many challenges that the country was facing, was far from being a simple task. The late 19th and early 20th centuries, i.e., the period from ultimatum to regicide (and then the establishment of the Republic), were a time of increased instability and unrest, revealing the impasse and crisis of old political, institutional, economic and social structures, lived in a cultural and mental environment of pessimism and decadence (pp. 345-346).

In this problematic context, the press emerged, in several situations, as highly critical of the monarchist status quo (Sardica, 2012). However, in the context of this work, the promotion of the ideology inherited from the French Revolution is strongly present, for example, in Brazil (Pires, 2017), namely in the promotion of a world of progress (Sardica, 2012).
On the relationship between religion, State, freedom and science/reason, *O Faialense*, in the same edition of October 11, 1863, reports that

Science and industry do not astonish you as a Christian. All sciences demonstrate divinity, all progress serves God. There are so many other steps that lead to the altar. Material progress is the earthly redemption of humanity. Jesus Christ restored to man the power of his reason, binding him to the eternal; and to the eternal the power of his love, inclining him to man [...]. It is impossible to fail to recognize the great progress of civilization, but there is still a long way to go (*O Faialense*, Year 7, no. 10, October 11, 1863, p. 2).

At the regional level, on June 15, 1867, *O Faialense* reported the following:

The news that has been received lately from São Miguel island presents its inhabitants under the impression of religious ideas that are a little exalted and perhaps not very convenient for the peace of families. The cause of this abnormal state is well known. Four missionaries have come to the island, two of whom are still there, to preach the doctrines which they say are those of our holy religion, and they have dragged behind them the people, who, by their present state of instruction, still do not know how to properly demarcate the limits which separate true faith from fanaticism and superstition (*O Faialense*, year 10, no. 44, June 15, 1867, p. 1).

From the 1870s onwards, in the propaganda phase (1870-1910), a positivist ideology based on the logic of the natural sciences was mobilized. Catroga (2010) states that "[...] the establishment of the Republic appeared to everyone as a necessary consequence of the becoming of the universe, which would have moved from its primordial homogeneity to the heterogeneity of its biological and, above all, social manifestations” (p. 96).

It is possible to see the enormous dynamism in the press, also in the diffusion of political positions and between positions of distinct contents. In this regard, João (2008) states that

Political combat journalism was very important in the 1880s, and the press was militant and, in some cases, polemic. [...]. Newspapers were usually composed of opinion articles, transcripts of news from the continental and foreign press, information on local life and advertisements which were an increasingly valuable source of income. [...]. In the dissemination of historical and cultural order (p. 139).

On December 24, 1865, *O Fayalense* reported that

[...] the ideas of freedom, civilization and progress awakened there, born there, or planted there, are strengthened – robust and vivid [...]. There is much mystery in social events, just as there is much darkness in the phenomena of nature (*O Faialense*, year 9, no. 20, December 24, 1865, p. 4).

We conclude this section by stating that, on October 5, 1910, the revolution took place, with the establishment of the First Republic and the end of the Constitutional Monarchy. In this revolution, "[...] almost everybody who had a (public) opinion was united against a deadlocked monarchy, run, as it was, by unstable governments and a rather inconsequential king" (Sardica, 2011, p. 64). Moreover, as Alexandre Barbas (1957) states, “To be a republican is to be free from all prejudices, to love the truth imposed by science” (p. 35).

5. Conclusion

Newspapers can play an essential role, not only directly in transmitting descriptive information about the role of science and technology, but it is also necessary to keep in mind the idea that a set of values and representations underlying this transmission can serve, intentionally or unintentionally, diverse and different agendas and even ideologies. Mergoupisavaidou et al. (2012) advocate that historians may use daily or weekly press in their research on topics such as the political, social and cultural history of the societies they analyse, inasmuch that press may be a privileged vehicle for the dissemination of
scientific knowledge and a relevant instrument in the development of images of science and technology by the readers, as well as the public perception of their role in society.

Tavares et al. (2009) show, in their study of three Portuguese newspapers – one of them being from the Azores, from São Miguel island – that, at the beginning of the 20th century, “[...] the news object of this research transmits a conception of science and technology whose foundation is the sense of mission, for the good of Humanity” (p. 532). This is a very optimistic representation of science, with scientism being pursued as “an ideology of progress” (p. 532), with a very intense political dimension and not only that of scientific dissemination and information. In this respect, Suljok (2015) posits that “the socio-historical dimension provides insight into the importance of understanding (changes in) the social context where media patterns and particular scientific interests are formed” (p. 17).

6. Acknowledgements

Funding: University of the Azores, Interdisciplinary Centre of Social Sciences-CICS.UAc/CICS.NOVA.UAc, UID/SOC/04647/2020, with the financial support of FCT/MEC through national funds and when applicable co-financed by FEDER under the PT2020 Partnership Agreement.

References


