Communication Design in Newspapers: A Comparative Study of Graphic Resources in Portuguese and Spanish Publications

Fátima Gonçalves, Joaquim Brigas, Jorge Gonçalves

Abstract—As a way of managing the increasing volume and complexity of information that circulates in the present time, graphical representations are increasingly used, which add meaning to the information presented in communication media, through an efficient communication design. The visual culture itself, driven by technological evolution, has been redefining the forms of communication, so that contemporary visual communication represents a major impact on society. This article presents the results and respective comparative analysis of four publications in the Iberian press, focusing on the formal aspects of newspapers and the space they dedicate to the various communication elements. Two Portuguese newspapers and two Spanish newspapers were selected for this purpose. The findings indicated that the newspapers show a similarity in the use of graphic solutions, which corroborate a visual trend in communication design. The results also reveal that Spanish newspapers are more meticulous with graphic consistency. This study intended to contribute to improving knowledge of the Iberian generalist press.

Keywords—Communication design, graphic resources, Iberian Press, visual journalism.

I. INTRODUCTION

TODAY, society has access to large daily amounts of information, of all kinds, including communication and advertising messages in different formats, with excessive visual and sound information. The graphic information demands a greater capacity to observe details, styles, social tendencies and cultural changes [1]. Since readers themselves determine the content they consume, new strategies have emerged, new models and ways of capturing their attention and facilitating the understanding of information content [2].

The aim of this study is to analyze the visual trends in the Iberian press through Portuguese and Spanish publications, namely: *Jornal de Notícias*, *Público* (Portugal); and *El Mundo* and *El País* (Spain). Thus, in a concise way, we attempt to evaluate communication design [3] in journalism [4] by analyzing the use of different elements of graphic information representation [5]. It is a study that has as the main objective to investigate the parameters that support the printed newspapers [6]; that is, the survey of the different types of graphic elements which the publications use. In short, the main challenge is to initiate an attempt to map the elements

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and resources present in a publication [7], given the unquestionable increase in the use of visual resources in printed newspaper layouts [8], [9].

The visual communication of printed publications brings together several graphic elements that are a consequence of the visual culture that predominates in society [10]. By synthesizing the journalistic information [11], the graphic information offers the reader evident elements of its authenticity and also presents a great power of persuasion [12]. The following objectives were defined: use graphic language [13] to determine to what extent visual communication is used in Iberian newspapers [13], [14]; identify the specificities of newspapers as well as the influence they exert in the information understanding; systematize, based on the study of the different graphic projects, indicators that currently seem to guide the editorial design of Iberian newspapers.

II. METHODOLOGY

This article is based on a quantitative method analysis which is explained in this section.

A. Characterization of the Sample

After selecting the publications to be included in this study, the period of analysis was defined between January and March 2014, a period of time in which 90 editions of each of the aforementioned newspapers were published, making a total of 360 publications. Assuming that the categories do not change on a daily basis, a probabilistic random sample stratified by newspaper was used, in order to reduce the number of cases to be analyzed and to find a subset of editions that represent all the publications, based on the logistic and temporal impossibility of proceeding to an analysis of all of them [15]. It was determined that the sample size, setting a confidence level of 95%, a variability of 10% and a precision of 5% [16], were 13 samples stratified by journal. To summarize, the corpus of analysis of the newspapers involved 52 numbers of newspapers selected in the period between January 1 and March 31, 2014.

The supplements, sometimes, included in the newspapers' editions were not considered as corpus.

B. Criteria

The analysis took into account several quantitative aspects of each of the graphic elements present in the publications, in order to obtain an objective and systematic description. Thus,

each publication was divided into each of its constituent elements, allowing to measure the relationship between them and to be able to establish a comparative basis. In each newspaper the following was analyzed: the pages being collected, the number of pages and the different sections. As for the textual formats, an essential element was gathered; that is, the number of columns, the number of news items and the layout type used by each page were taken into consideration. To quantify areas with photographs, each photograph in the publication was measured and the presence of legend, signature and format checked. In relation to the total number of other graphic elements (infographics, graphs, maps, tables, comics, etc.), each of the defined typologies was analyzed and quantified. The indicators related to the areas implied a strict measurement of the spaces occupied by each of the graphic elements, and then, the total printed area and the relative weight occupied in the whole of the publication were calculated. Thus, it was possible to obtain a real evaluation of the space occupied by each type of content in the publications.

III. RESULTS

A total of 2816 pages were analyzed, with a great variability in the number of pages per edition of each publication (Table I). Regarding the newspapers in each country, the analysis reveals that Spanish newspapers have, on average, a number of pages higher, by publication, compared to Portuguese newspapers (58 vs. 50). The analysis suggests, in general terms, that in Spain there is a greater investment in advertising, which translates into double the average number of advertising pages full of content compared to Portugal (8 vs. 3). Comparing each newspaper, by country, the Spanish newspapers *El Mundo* and *El País* present, on average, a more similar number (8 vs. 7), while the Portuguese newspapers *Público* and *Jornal de Notícias* show lower values and greater variation (6 vs. 3). It is worth noting the low value registered by *Jornal de Notícias* (3) of the average number of complete pages of advertising, by edition. More, the analysis showed that the newspapers *El Mundo*, *El País* and *Público* presented graphical approximation relations, both in the average news per page and the number of sections per publication (Table II).

TABLE I
PAGES AND ADVERTISING

Newspaper	Avg. of Pages	Avg. of full pages of advertising	Avg. of number of advertising
Jornal de Notícias	50.2	3.2	22.3
Público	51.1	5.5	14.5
El Mundo	58.2	7.7	29.1
El País	57.2	7.2	22.5

TABLE II
COLUMNS, NEWS AND SECTIONS

Newspaper	Avg. of columns per page	Avg. of news per page	Number of sections
Jornal de Notícias	5.9	3.3	17
Público	5.0	2.0	23
El Mundo	4.9	1.9	25
El País	5.0	1.9	22

In the newspaper sample analyzed, there is a variability in the number of columns per page of each publication. Overall, this number ranges from 4 to 6 columns per page. The Portuguese daily *Jornal de Notícias* uses a six-column layout as its basis, although it varies its number in some sections, with an average number of 5.9 columns per page. On the other hand, the *El País* and *Público* diaries use as a base five-column layout, although in some sections they also decrease or increase this number, presenting an average value of 5.0 columns per page. There was a relationship between the number of columns per page and the number of news stories per page, the daily *Jornal de Notícias* being the one with the highest number of news and columns per page, suggesting little investment in investigative journalism, generalizing the fast reading formats. It is found that shorter and shorter news accounts for more than half in each publication. *Jornal de Notícias* is the newspaper that presents as a base a grid with more columns per page, which allows for a greater number of modules that break the monotony with different layouts.

In a newspaper, the content to be offered to the reader should be presented in a concise and organized layout, which can be guaranteed by the editorial and graphic continuity to which the reader is accustomed, with the sections occupying the same places daily, in order to facilitate the navigation through the news. The newspaper *Jornal de Notícias* is the one that presents a more compact structure, with only 17 sections. The remaining journals come with a more similar organization and ranking of information, ranging from 22 to 25 sections. The section with the largest representation is the same in the newspapers *El Mundo*, *El País* and *Público* (Spain and Portugal, respectively), while in *Jornal de Notícias,* the most representative section is sports.

How the various elements are distributed on a page contributes to the integrity, balance and identity of a publication. While any editorial project requires a structure that facilitates the insertion of content across the pages and ensures the continuity of the overall design of the publication, the layouts should be designed to assure the variety in the number of solutions, allowing to break the monotony. Regarding the layout (Table III), the *Jornal de Notícias*, *Público* and *El Mundo* prefer more "L" layouts, while *El País* prefers to use the "U" format.

TABLE III
TYPE OF LAYOUTS

Newspaper	% «L»	% «U»	% Other
Jornal de Notícias	17	10	73
Público	14	12	74
El Mundo	16	15	69
El País	19	22	58

If you consider the use of layouts in "L", it is verified that their use varies between a minimum of 13.7% and a maximum of 19.0%. The use of layouts in "U" presents a greater variation, with a minimum of 10.0% and a maximum of 22.4%. All publications present an irrelevant value of "indefinite" layouts (1.3% to 4.8%). In general terms, *Jornal*

de Notícias (16.6%), *Público* (13.6%) and *El Mundo* (16.3%) use graphic news in "L" more graphically, while *El País* prefers to use the "U" format (22.4%).

With the evolution of technology, publications have used different strategies to capture attention and facilitate the understanding of information content by its readers. Thus, graphic elements were gradually introduced in the production of news content. Distributed spatially in the pages, with the aim of making the content more contextualized, these elements capture the attention and improve the reader's understanding of the news. That is why it is essential to study the use of these graphic resources (Fig. 1).
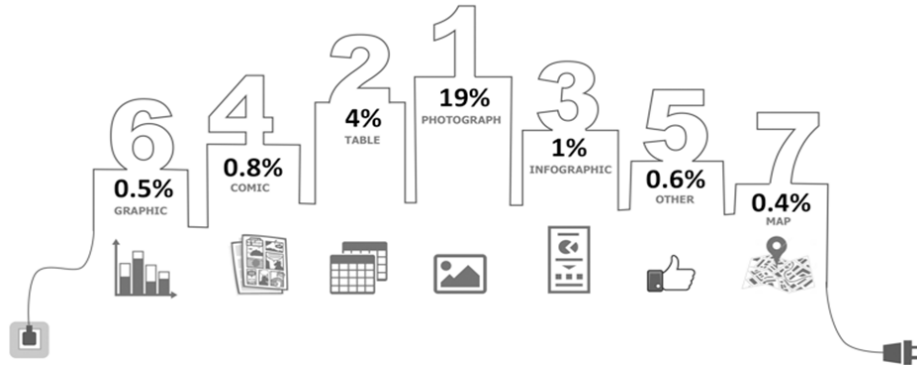

Fig. 1 Use percentage of graphic resources

In this study, it was verified that the photograph is more used, occupying between 16% and 19% of the graphic area, per newspaper. There is a balance between *Jornal de Notícias* and *El Mundo* in this indicator (both with 19%). The tables appear as the second type of graphic representations most used in the newspapers of the sample (between 1% and 4%). Although with greater variation, these elements are more used in *El Mundo* and *Jornal de Notícias* (4% vs. 2%) than in *El País* and *Público* (both with 1%). Third, we have the infographics with very close values, varying between 0.5% and 1% of occupancy of the graphic spot, per newspaper. Finally, with average values below 1%, we found comics (0.8%), other graphical elements (0.6%), graphs (0.5%) and maps (0.4%) appear in descending order.

A. Photography

In the specific case of the use of photography in the press, it was for a long time only a support or a complement of the textual content [17]. Nowadays, with the tendency towards the visual, the photographs with their strong ability to attract attention, coupled with the power of the attraction of color and the size they occupy on the page, have come to gain a prominent place in publications [18]. In this study, this case was verified. Table IV shows the number of photographs published in the newspaper editions of the sample.

twice the number of the lowest number, *Público* (128 vs. 65). When comparing the number of photographs per edition with the number of pages of each newspaper, it is verified that *Jornal de Notícias* presents an average number of photographs per page that is much higher than the others (3 vs. 1). When comparing the number with the average area of each photograph, it can be seen that *Jornal de Notícias* presents the highest number of photographs per edition (128) with the lowest average area (8%), from which it can be deduced that this publication presents on average more photos per page but of smaller size, compared to the others; thus, maintaining an approximation to the remaining newspapers, in the average area of all the photographs.

Photo captions are one of the most important textual elements on a page. These get a high reading rate because the readers first look at the photograph, read the subtitle and only then go for the rest of the text. If the subtitles are placed in a standardized way they will establish a sense of consistency and harmony in the publication [19]. Another important element is the signature of the photographs, which increasingly becomes the mark of credibility for the newspaper and, at the same time, of responsibility for the information transmitted [20]. The Table V shows this information.

TABLE IV
PHOTOGRAPHS

Newspaper	Avg.	Avg. per page	Avg. area per page cm^2
Jornal de Notícias	128.4	2.6	7.6
Público	65.2	1.3	12.9
El Mundo	70.2	1.2	15.7
El País	78.7	1.4	13.1

Regarding the number of photographs published by edition, the *Jornal de Notícias* appears in firstly ranked, with almost

TABLE V
CAPTION AND SIGNATURE OF PHOTOGRAPHS

Newspaper	% with both	% only with caption	% only with signature	% none
Jornal de Notícias	38.5	48.3	1.9	9.4
Público	38.5	40.3	7.3	13.9
El Mundo	52.9	30.8	9.5	15.8
El País	49.3	36.7	0.6	13.4

The analysis reveals that Spanish newspapers are more concerned with graphic consistency; that is, with the presence

of a caption and signature in the published photographs, compared to Portuguese newspapers (51% vs. 39%). In general, more than three quarters of the photographs (83%) have subtitles and more than half (56%) signatures, revealing a concern for the credibility and responsibility of the information provided by each newspaper.

The prominence of the characteristics or visual attributes of a photograph, as well as its distribution in the layout, establishes hierarchies and relations between the different elements and it is essential to determine the flow of the narrative [21]. Currently, the format of the photos proves to be a very effective tool for emphasizing news content and allowing visual continuity. By taking on various sizes and shapes, the photographs allow breaking the monotony. Table VI shows the percentage of rectangular, circular and other shapes that the photographs present in the newspapers.

TABLE VI
SHAPE OF PHOTOGRAPHS

Newspaper	% rectangle	% circular	% other
Jornal de Notícias	80.7	7.3	11.9
Público	91.9	1.2	6.2
El Mundo	92.7	0.3	6.8
El País	98.2	0.1	1.6

Regarding the types of geometric formats used in newspaper photographs, it is observed that there is a tendency to use the classic rectangular format, with about nine out of 10 photographs to be in this format (91%). Of note is the use of the circular format in *Jornal de Notícias* (7%), while the average use by other newspapers is irrelevant (1%). As for other geometric formats, it is also clear that *Jornal de Notícias* also ranks first (12%), followed by *El Mundo* with 7%, *Público* (6%), and *El País* (2%).

IV. CONCLUSION

Journalistic content adjusts to current trends, responding to the demands of readers, who prefer visual referrals. Communication design has proved decisive for increasing the efficiency of journalistic information, promoting the understanding of information and enabling the infrastructures essential for the implementation of a consolidated strategy of visual modernization, as a factor of proximity among younger generations. Publications gain competitive advantage by using an effective communication design, which allows them to increase quality and maintain a good level of credibility. In a society where there is a proliferation of graphic elements in the media, its inclusion is essential to attract and retain readers.

The use of graphical elements arises to improve the informative offer, making the publication more attractive and dynamic. Graphic rhythm, like the informational rhythm, helps to navigate through the publication, translates into identification with the reader and can become an element of loyalty.

The publications present similarity in the use of graphical solutions, which demonstrates a visual tendency in the design of communication of both Portuguese as Spanish newspapers.

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