

The agenda-building process on digital news media. A comparative study with issue preferences of readers and Twitter users

La construcción de la agenda de los cibermedios. Estudio comparativo con las preferencias temáticas de lectores y usuarios de Twitter

Pedro-Luis Pérez-Díaz. San Antonio Catholic University of Murcia. Spain.

plperez@ucam.edu

[CV]  

Enrique Arroyas Langa. San Antonio Catholic University of Murcia. Spain.

earroyas@ucam.edu

[CV]  

Rocío Zamora Medina. University of Murcia. Spain.

rzamoramedina@um.es

[CV]  

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ABSTRACT

Introduction: The purpose of this research is to analyze the audience activity in a more participatory process of agenda-building on four leading digital news media in Spain (El País, El Mundo, El Confidencial and El Diario). **Methodology:** Based on a content analysis (n=3,600 topics collected during 15 days of June 2017), we register the coincidence between topics from homepages, the ‘most read’ classifications and the trending topics associated on Twitter. **Results and conclusions:** It is concluded that the studied digital news media exhibit an agenda sensitive to citizen participation, which translates into a more lasting prominence for those issues that coincide with the most read stories or trending topics. Although the distance between the news treatments favored by journalists (hard) and the most read stories (soft) prevails, it is the former ones that manage to catalyze greater participatory metrics, in concomitance with other factors such as the interagenda coincidence, the permanence and position on the homepage or the publishing time.

KEYWORDS: news agenda; digital news media; digital journalism; citizen participation; Twitter; web analytics.

RESUMEN

Introducción: Esta investigación tiene como propósito analizar la actividad de la audiencia en la construcción de la agenda periodística de cuatro cibermedios generalistas líderes en el ámbito español (El País, El Mundo, El Confidencial y El Diario). **Metodología:** A partir de un análisis de contenido (n=3.600 temas recogidos durante 15 días de junio de 2017), se registra la coincidencia entre los temas de portada, las clasificaciones de ‘lo más leído’ y los ‘temas del momento’ asociados en Twitter, entre otras variables. **Resultados y conclusiones:** Se concluye que los cibermedios estudiados presentan una agenda de portada sensible a la participación ciudadana, que se traduce en un protagonismo más duradero para aquellos asuntos que coinciden con los más leídos o los *trending topics*. Aunque prevalece el distanciamiento entre los tratamientos informativos preferidos por los periodistas (duros) y los más leídos (blandos), son los primeros los que logran más participación, en concomitancia con otros factores como la coincidencia interagenda, la permanencia y la posición en portada.

PALABRAS CLAVE: agenda informativa; cibermedios; periodismo digital; participación ciudadana; Twitter; analíticas web.

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Translation by **Carlos Javier Rivas Quintero** (University of the Andes, Mérida, Venezuela).

1. Introduction

The journalistic decision flows that lead to news selections, which have traditionally emerged from a professional isolated judgment, mutate on the digital context, by virtue of a participatory culture that celebrates making the audience interests visible through the content generated by the user and the daily *feedback* on the media agenda-building process (Tandoc Jr., 2014). Literature about participatory journalism persists in proving that professionals do not share sensitive aspects with their readers that are related with their occupational authority (Abbott, 2017), like *gatekeeping*. With all of this, more and more studies describe how this phase of digital news production could be conditioned by the dynamics and activities of the connected citizenry, which would assert the old idea that “the true journalism matter is the conversation that public is having with itself” (Rosen, 1997, p. 191).

In the mid-nineties of the last century, the Internet distributed architecture, as opposed to the concentration structures of mass media, already posed a challenge: the dispersion of information on data nodes and the interactivity could put at risk the control of news agenda (Newhagen and Levy, 1996). With the arrival of a more social web, the readers of digital news media would end up finding before them a whole set of interactivities that have an impact on news visibility, such as having access to them, sharing them, writing comments or voting and rating its interest and quality: “The results of these activities are collectively known as news *popularity*, an evaluation of the value of a news according to the audience” (Shoemaker, Johnson, Seo and Wang, 2010, p. 57).

1.1. A participatory gatekeeping based on the activity of the audience

This way, Nielsen (2017) distinguishes a gatekeeping based on the audience that entrains a filtering which, with higher or lower awareness and in an individual or collaborative way, results in content with certain visibility generated by the user, as named by Singer (2014). The visibility derives from the behaviors of an active audience (Singer *et al.*, 2011) that has provoked a paradigm change towards a *gatekeeping* and a framing on the web (Meraz and Papacharissi, 2016) in which the connected citizens alter the traditional prominence of particular agents and promote new *gatekeepers*, they boost *issues* and shape the very same interpretation of those topics appealing directly to the professional and showing dynamics of power (Pérez-Díaz, Berná Sicilia and Arroyas Langa, 2016).

On a digital environment crowded by audiences of volatile attention, web metrics and analytics have begun to mold editorial decisions (Nguyen, 2013). This data is used precisely on news selection techniques based on aggregation, in which software compounded by algorithms is used to collect content related to a certain issue or context, generally based on metadata, votes or keywords. The most evident example on digital news media is the ubiquitous sections, enshrined as “the most read”, “the most commented” or “the most shared”, that make topics visible based on purely quantitative parameters.

As a consequence, the active passive/producer consumer hub, in which media traditionally tried to classify the audience, has been affected by light or low intensity participation as *feedback* that conditions and affects the news production process, and more specifically, the setting of the media and political agenda (Masip, Guallar, Suau and Ruiz-Caballero, 2015; Lawrence, Radcliffe and Schmidt, 2017), because a news visibility, prominence or position on the homepage is strongly related to the number of reads it has received (Lee, Lewis and Powers, 2012).

1.2. The gap between the news treatments preferred by journalists and citizens

For Manosevitch and Tenenboim (2007, p. 15), the prioritization of contents obtained through the aggregation mechanisms that boost sections such as “the most read, shared or commented” attracts web traffic, it provides an input for editorial decisions and allows to evaluate what issues arouse public attention. However, the use of these analytics for the elaboration of news pieces involves a whole series of latent risks (Tandoc Jr. and Thomas, 2015). The disagreement between what is important to the readers – often *soft news* – and the issues that worry journalists, uncovers an evident gap that must be solved (Boczkowski and Peer, 2011) to find balance between public interest and the interest of public.

Likewise, these sites often become a showcase for trivial and info-entertainment issues (Boczkowski and Mitchelstein, 2015; Morera Hernández, 2016; Welbers, van Atteveldt, Kleinnijenhuis, Ruigrok and Schaper, 2016), that can undermine the digital news media sobriety and prestige. This issues disagreement provokes a gap between supply and demand for the latest information that Boczkowski and Mitchelstein (2015) call news gap: “While editors and journalists tend to prioritize news about political issues [...] consumers, however, prefer news about nonpublic affairs, such as sports, show, police [topics] and the weather” (Mitchelstein, Boczkowski, Wagner and Leiva, 2016, p. 1030).

Another latent danger is that the media ends up enslaved to the audience appetites; a characteristic way of proceeding of the sensationalist business model in which the quality of the journalistic product is neglected in favor of lighter information submitted to the audience dictatorship. The suspicions that journalistic formulations handled by citizens could disguise, in many occasions, “lures of the worst populism with which the modern media would wash their image before some

accommodating citizens” (Dader, 2010) have sparked preoccupation mainly (Poell and Van Dijk, 2014), as it can affect the journalistic independence, key condition for the detachment that grants the journalist some level of authority and credibility.

1.3. The influence of conversation on social networks in the agenda-building process

The explorations over the power of emerged issues from external sites, such as social networks, have foster an inviting topic for research, focused on the interrelations that are established between social networks and mass media. Tandoc Jr. and Vos (2015) suggest that the growing use of social media by journalists has led them to have to balance the very own norms and values of journalism and the increasing audience influence, that is perceived as a key element for the journalistic activity survival.

In this sense, Twitter has become a relevant node of spontaneous communication among citizens; it competes with the strategic communication of social and political stakeholders that exercise a great freedom to share contents regarding their projects and interests, as a form of power (Castells, 2009). In this ecosystem, the thematic structuring based on terms and hashtags acts as a “folksonomy” that helps organize conversations among users and delineates an agenda of issues and popular protagonists that are shown with a variable transience. Related to the potential of this social network in the media agenda setting, López Meri (2015, p. 37-38) synthesizes that the social network has become a newsworthy criteria, on which the debates approaches and sources, affect the *newsmaking* process.

In the Spanish ambit, Rubio García (2014) verifies the existing synchronicity between the agenda of the public on Twitter and the agenda of traditional media due to the equal access that professionals and citizens have to information, while Antón Crespo and Alonso del Barrio (2015) point out that politics, culture and sports tend to be the issues with more matches between the homepage agenda of several Spanish digital news media and the one from users of this social network. Another study limited to a national scope reveals that Spanish digital news media keep a moderate influence, since the correspondence between the offered *breaking news* by digital newspapers and the issues that were *trending topics* on Twitter never exceeded 25% (Tous Rovirosa, Rivero Santamarina, Meso Ayerdi y Larrondo Ureta, 2015).

In view of these theoretical precedents, we part from the objective of analyzing the interrelations between the audience participatory activity and the journalistic agenda of four generalist digital news media, leaders in the Spanish ambit (El País, El Mundo, El Confidencial and El Diario). The three hypothesis of this research are enunciated as follows:

H1. The leading topics present on the digital news media homepages in Spain possess a more lasting professional attention when they coincide with the agenda issues modeled by the activity of the audience (ratings as “the most read” on their websites and *trending topics* on Twitter).

H2. The information gap that usually sets apart hard news treatments, preferred by journalists, from the soft ones, favored by readers, prevails.

H3. As a consequence, the most read issues, typically soft, get higher participatory metrics in the form of comments and last more as trending topics on Twitter than the rest of topics.

2. Methodology

Once the hypothesis have been enunciated, the strategic sample was comprised of four leading digital news media in the Spanish ambit, that would allow us to utilize the citizen participation and

feedback, from the point of view of available resources to the potential activity of a critical number of users and readers. The selection of the cases was done based on the audience data offered by the service provider of audience measurement, comScore, in May 2017, the previous month to gathering the data. To provide diversity and some comparative dimension, two leading digital news media from a printed matrix (ElPais.com and ElMundo.es) and two native leading digital news media (ElConfidencial.com and Eldiario.es), were selected.

2.1. Population and sample

To verify the existing affinity or interrelation degree between the issues and news treatments present on the homepage agenda of the leading digital news media in Spain and the issues preferences shown by the audience through readings, comments and conversations that took place on Twitter, we proceeded to register different types of quantitative data. On the one hand, a follow-up process was done to the homepages of the four digital news media during the first 15 days of June 2017, which were filed together with the classifications of “the most read”. On the other hand, the first level of their hyperlinks was saved, which permitted us to have a universe of study formed by enriched contents with completely functional links.

The analysis unit was the news issue that comprises one or two matters of newsworthy interest linked between them and often articulated by several pieces (such as news, comments or opinion pieces) subsumed into the main issue. The analysis of this material was carried out selecting a quota sample (non-probabilistic) of the first 10 issues present on two digital news media sites: the homepage and “the most read” ranking. Based on this selection, two relevant variables were identified for the study: the granted importance given by the own professionals of the digital news media to the issues, and also, the interest of the citizens for the issues as a reading of choice.

This way, in each register the top 10 issues whose positioning denotes greater relevance on the homepage (prioritized by the reading sense and seriousness, from left to right and from top to bottom). In a similar way, from the most read pieces on the ranking, the top ten displayed on the list were chosen. The news interest issues were registered with a frequency that would reflect the updating pace given by the news trend in Spain, set in three daily time-slots for its collection (9:00 h., 15:00 h. y 21:00 h. UTC+2). Therefore, the total strategic sample (n) reached a total of 3.600 news issues (1.800 on homepage and 1.800 of “the most read”).

2.2. Data-collection instruments and research procedure

An analysis template that would allow an effective comparison between the contents of both agendas was designed based on this sample, revealing the level of correspondence of each of the digital news media proposals with their audience interests and with the active and connected citizens segment whose conversations are shown on the comments of each piece and on the social network Twitter. For the categorization of the issues we part from the 16 topic categories of the previous study of the digital news media agenda elaborated by Odriozola Chené (2012) and based on the criteria of the International Press and Telecommunications Council for the international news transfer, which we adapt to our research until reaching a score of topics:

Chart 1. Codification sheet to analyze the interrelations between the professional agenda and the ones profiled by the participatory activity of the citizens on digital news media websites.

Identified elements	<p>1. <i>Date:</i> [Value Range: 1-15 of June 2017]</p> <p>2. <i>Digital news media.</i></p> <ul style="list-style-type: none"> <input type="radio"/> El País <input type="radio"/> El Mundo <input type="radio"/> El Confidencial <input type="radio"/> El Diario <p>3. <i>Time-slot:</i></p> <ul style="list-style-type: none"> <input type="radio"/> Morning (09:00 h., considering the participatory metrics obtained from 09:01 to 15:00 h.) <input type="radio"/> Afternoon (15:00 h., considering the participatory metrics obtained from 15:01 to 21:00 h.) <input type="radio"/> Night (21:00 h., considering the participatory metrics obtained from 21:01 to 09:00 h.) <p>4. <i>Agenda:</i></p> <ul style="list-style-type: none"> <input type="radio"/> Homepage <input type="radio"/> “The most read”
Content	<p>5. <i>Headline/headlines of the news pieces published around the news topic:</i> [Open text]</p> <p>6. <i>News topic:</i></p> <ul style="list-style-type: none"> <input type="radio"/> Social matters <input type="radio"/> Science and technology <input type="radio"/> Corruption and fraud <input type="radio"/> Culture, art and shows <input type="radio"/> Sports <input type="radio"/> Disasters and accidents <input type="radio"/> Economy, finances and business <input type="radio"/> Education <input type="radio"/> Employment <input type="radio"/> People <input type="radio"/> Equality and human rights <input type="radio"/> Environment <input type="radio"/> Nationalisms <input type="radio"/> Leisure and entertainment <input type="radio"/> International politics <input type="radio"/> National politics <input type="radio"/> Religion and beliefs <input type="radio"/> Health <input type="radio"/> Justice and events <input type="radio"/> Terrorism, wars and other conflicts <input type="radio"/> Others
Interagenda Coincidence	<p>7. <i>At least one news piece encompassed in the topic is present on the other digital news media website agenda (there is coincidence between homepage and “the most read”):</i></p> <ul style="list-style-type: none"> <input type="radio"/> Yes <input type="radio"/> No <p>8. <i>At least one term encompassed in the topic is present on the agenda of “trending topics” that conforms the social conversation on Twitter in Spain:</i></p> <ul style="list-style-type: none"> <input type="radio"/> Yes <input type="radio"/> No

Evolution	9. <i>Position on the agenda:</i> [Values Range: 1-10] 10. [If 4 = Homepage] <i>Permanence of the news topic in the next time-slot:</i> ○ It remains ○ It disappears
Treatment	11. <i>News treatment of the topic:</i> ○ Hard ○ Soft
Participatory metrics	12. [If 8 = Yes] <i>Minutes of conversation accumulated by the associated terms to the topic that became “trending topics” on Twitter (Spain):</i> [Value range Generated comments by the leading piece encompassed in the topic [Value range: from 0 to whatever number of comments the leading piece encompassed in the topic can generate]

Source: our own elaboration.

The position held by each topic in the two agendas was used as a critical variable to prove the prioritization. For its part, the attention maintained towards the issues (their permanence) by the journalists offered key data to approach the interdependence between agendas. The interagenda coincidence between “the most read” and the homepage agenda was determined comparing the pieces on both sites at the moment of collecting the data and in the previous time-slot.

In view of the previous studies, we opted for comparing if the alienation between the professional judgment preference for hard news and the public interest on soft news prevailed. Following Reinemann, Stanyer, Scherr and Legnante (2012), we concluded that the approach to determine whether an issue had been treated as hard or soft news must be multidimensional. Therefore, we determined the “hardness” of each news issue paying attention to diverse factors in a dimensional triad: the *issue* (politically relevant/not politically relevant), the *focus* (its social/individual relevance and its thematic/episodic framing) and the *style* (the coverage used is personal/ impersonal and it presents an emotional/non-emotional approach). In this sense the orientation that prevailed in two or more of these dimensions determined this “hardness”, so that the soft/hard categories would be reciprocally exclusionary.

To measure the closeness of the topics that were coverage targets on digital news media with the issues that interested the public, the two studied agendas on each digital media were associated with two participatory metrics: the number of comments they sparked and the amount of time their related terms remained as “trending topics” on Twitter. The most popular topics on this platform during each studied period were obtained from the list offered by the Trendinalia¹ Spanish section that registers all terms and hashtags that become national “trending topics” along with the amount of time that they remained on this social network. This task required a detailed organization of the national *trending topics* corpus to pick those semantically related with every topic that appeared on the sample of the four digital news media. It was necessary to carry out an exhaustive tracking of what was a trend

¹ Accessible from: <http://www.trendinalia.com/twitter-trending-topics/spain/spain-today.html>

during those days to avoid losing any information. After this task was done, the intensity of the sparked debate by each of the 3.600 topics of the sample was quantified with the calculation of the total amount of associated minutes of daily conversation.

Finally, it was verified the inter-coded reliability through the recoding of a random subsample of 15% of the 3.600 analysis units by an external trained encoder (Neuendorf, 2002; Igartua Perosanz, 2006). The resulting coincidences granted an appropriate reliability to the study results, for both qualitative variables (\bar{x} of AO = 0.91; \bar{x} of Scott's pi = 0.7) and quantitative ones (\bar{x} of Pearson's r = 0.84).

3. Results

The content analysis results of the interrelations between the topics proposal designed by professional journalists and the one described by the citizens' interests are structured based on the five relevant objectives of our study: the selection of the topics and the interagenda coincidence, the evolution and permanence of these issues in the agenda, the news treatment they received and the associated participatory metrics.

3.1. News selection

Broadly, the comparative study of the two agendas – homepage and “the most read” –, present on the four digital news media, reveal full affinity on the first seven topics that lead the most frequent issues proposed by journalists and the ones most read by the audience. These topics involved 72.2% of the homepage topics and 65.3% of the total most read issues. The first two topics (national politics and economy) even coincide in position. However, while professionals prioritize the news about corruption and international politics, the citizens preferred terrorism and other conflicts, apart from events and legal issues.

Sports were also important topics, even though their proportion on the agenda of the “the most read” by the audience was greater than their presence on the homepage agenda. Other topics that experienced greater prominence on the agenda of “the most read” than on the homepage were terrorism and other conflicts, justice and events, while international politics received from the citizens practically half the attention of journalists. Leisure and entertainment, which take the eighth position on the most read agenda, fall to the 18th position on the homepage topics. It is the opposite for nationalisms, relevant on the homepage (8th position) but less important on “the most read” ranking (12th position).

If we observe the agenda of each digital news media separately (figure 1), the priority topics for El País were international politics, terrorism and other conflicts, and sports, while their readers showed a greater interest for terrorism and other conflicts, legal issues and events and, international politics. For their part, the most relevant topics for ElMundo.es were national and international politics and terrorism, while their readers preferred terrorism, legal issues and events, and sports.

Among the most important topics on ElConfidencial.com there were economy, corruption and national politics. Their readers showed a similar predilection for economy, but also for terrorism and other conflicts, sports and leisure. The most relevant topics for Eldiario.es were national politics, corruption and economic issues, while their readers coincide fully with the same topics, along with equality and human rights.

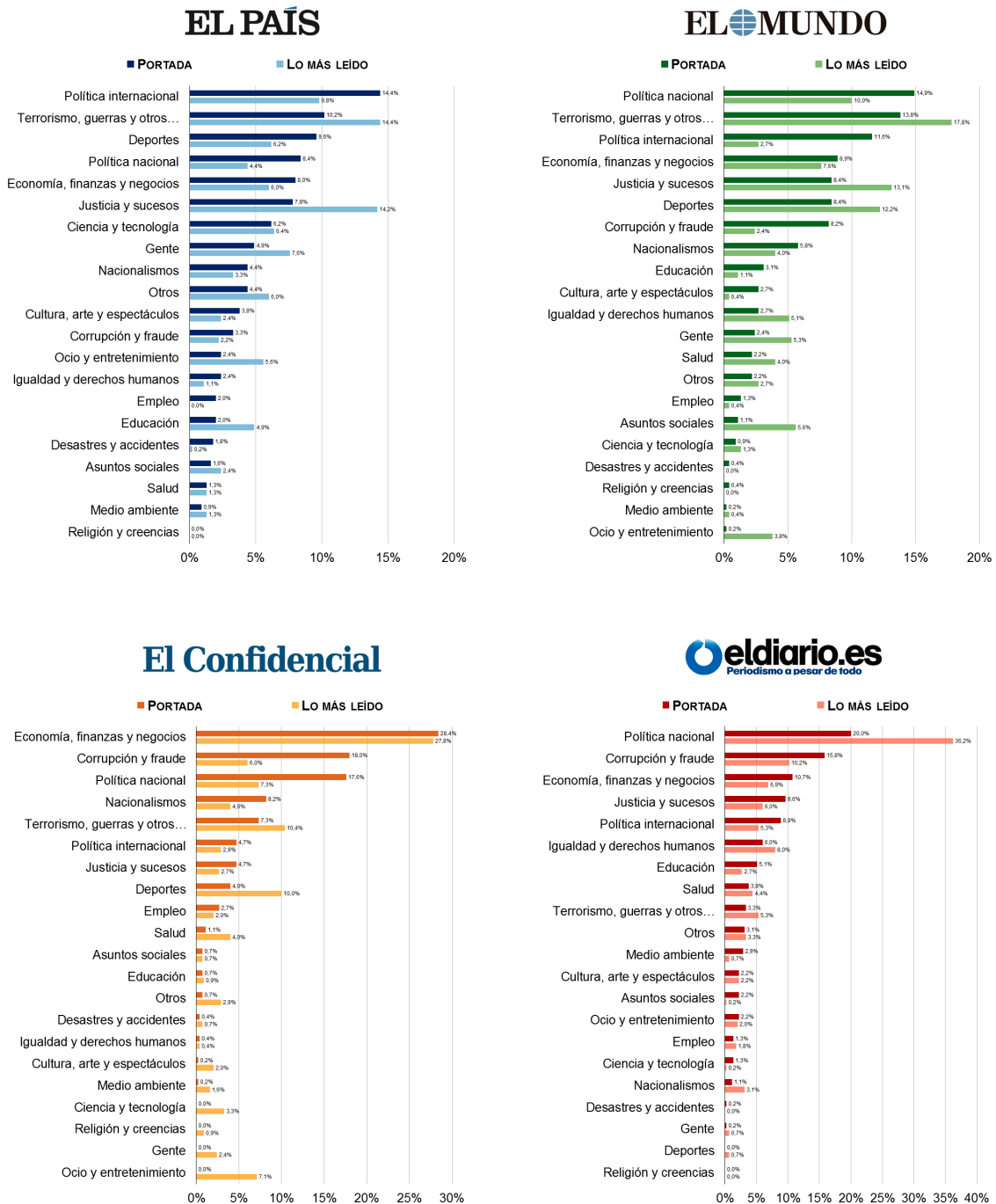


Figure 1: prominence frequency of the topics on homepages agenda and “the most read” on each digital media.

Source: our own elaboration.

3.2. Interagenda coincidence

The topics of the four studied homepages show 42.1% coincidence with “the most read” agenda and 44.8% with the *trending topics* on Twitter. Comparatively, the “the most read” agenda of the four digital news media show a greater coincidence with the topics of their respective homepages (67.1%) and a similar one with the trending topics on Twitter (43.2%). As seen on Chart 2, digital news

media that achieve greater interagenda coincidence between the topics on their homepages agendas and “the most read” are El Diario and El País (47.8% and 46.4%, respectively). For their part, this same homepage content on El Mundo (37.3%) and El Confidencial (36.9%) received a lower interest by their readers.

This data reveal that the readers of El País are the ones who comprise the agenda with most read topics that match better with the ones proposed by professionals: approximately three out of four contents of “the most read” have been published among the top ten homepage topics. For their part, the readers of El Confidencial coincide less with the leading homepage offer (only 56.9% of the most read pieces belong to topics present on the first homepage positions).

Chart 2. Proportion of topics that exhibit coincidence between the homepage agenda and “the most read” on each digital media.

		EL PAÍS		EL MUNDO		El Confidencial		eldiario.es	
		Homepage	'The most read'	Homepage	'The most read'	Homepage	'The most read'	Homepage	'The most read'
Homepage-“The most read” Coincidence	Yes	46,4%	75,3%	37,3%	67,6%	36,9%	56,9%	47,8%	68,4%
	No	53,6%	24,7%	62,7%	32,4%	63,1%	43,1%	52,2%	31,6%
	Total	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%
		Sig. χ^2 : $p_v = 0,000 < \alpha = 0,05 \Rightarrow$ Se rejected H_0		Sig. χ^2 : $p_v = 0,000 < \alpha = 0,05 \Rightarrow$ Se rejected H_0		Sig. χ^2 : $p_v = 0,000 < \alpha = 0,05 \Rightarrow$ Se rejected H_0		Sig. χ^2 : $p_v = 0,000 < \alpha = 0,05 \Rightarrow$ Se rejected H_0	

Source: our own elaboration.

Regarding the presence of terms associated with the homepage topics on Twitter, El Mundo is the digital media that generated more “social” transcendent topics because practically half of the proposed issues on their homepage (49.3%) got some type of social impact in the form of *trending topics*, something that El País accomplished on similar terms (46.7%). For its part, the agenda comprised of “the most read” makes the readers of El Diario the audience that outlines best what topics spark conversation on social networks (53.1%), with some distance from the figures that comprised the most read topics on El Mundo (44.4%), El País (39.8%) and El Confidencial (35.3%).

Chart 3. Proportion of topics that exhibit coincidence with “trending topics” on Twitter, homepage agenda and “the most read” on each digital media.

		EL PAÍS		EL MUNDO		El Confidencial		eldiario.es	
		Homepage	'The most read'	Homepage	'The most read'	Homepage	'The most read'	Homepage	'The most read'
Homepage – “Trending topics” on Twitter coincidence	Yes	46,7%	39,8%	49,3%	44,4%	43,6%	35,3%	39,8%	53,1%
	No	53,3%	60,2%	50,7%	55,6%	56,4%	64,7%	60,2%	46,9%
	Total	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%
		Sig. χ^2 : $p_v = 0,037 < \alpha = 0,05 \Rightarrow$ It is rejected H_0		Sig. χ^2 : $p_v = 0,142 \geq \alpha = 0,05 \Rightarrow$ Cannot be rejected H_0		Sig. χ^2 : $p_v = 0,012 < \alpha = 0,05 \Rightarrow$ It is rejected H_0		Sig. χ^2 : $p_v = 0,000 < \alpha = 0,05 \Rightarrow$ It is rejected H_0	

Source: our own elaboration

3.3. Evolution of issues

To measure the existing relation between the professional judgment (homepage agenda) and the immediate *feedback* that represents the most visited contents (“the most read” agenda), the generated comments and the associated conversation to them on social networks, the evolution of the homepage topics was determined when going forward on the contiguous time-slots, to verify if the topics remained (went up, went down or kept its position) or disappeared from the homepage. This piece of information shed light on the attention held and the continuous focus that professionals keep on their homepage topics.

The data show that, out of the 1.800 topics picked from the digital news media homepages, only 683 (37.9%) were tracked on the next time-slot –they did not disappear-. The longest professional focus was kept on terrorism, national politics, economy and nationalisms. The former three are precisely the topics that coincide with the first three of “the most read” ranking, as it was already noted. Issues like religion, equality, disasters and accidents, environment, social issues and social chronicle barely got a place into the homepage agenda.

Out of the 683 topics that remained on the homepage from a time-slot to the next one, 60.3% were also associated to terms that appeared among the *trending topics* on Twitter and 62.1% contained pieces that were part of the most read, which shows the noticeable relation between the citizens’ feedback over some issues and a corresponding journalistic attention to them (and conversely). Among those topics that had more permanent professional attention, five stand out: terrorism and other conflicts, economy, national politics, international politics and nationalisms. The former four coincide with the topics that digital news media addressed more frequently.

Out of the topics offered on homepage whose pieces gotten among the most read on the four digital news media, a more permanent professional attention was given to economy, national politics, terrorism and other conflicts, culture, nationalisms, corruption and international. Of them, culture and nationalisms were treated less frequently on the homepage agenda and, however, managed a more lasting permanence on the newspapers professional offer. Finally, the data revealed that the position of the topics on the homepage also had a correspondence with their permanence on it, in this sense, the higher the position a topic had, the more frequently it remained and moved to the next time-slot.

3.4. News treatment of issues

When observing how the frequencies treatment used on the four digital news media topics were distributed, we appreciated that, while the homepages group had a balanced representation of hard (50.7%) and soft (49.3%) topics, the audience “most read” agendas showed some propensity towards soft treatments (67.3%). While El Mundo and El Diario adapted to the already mentioned balanced treatment, El País showed propensity towards soft topics (60.44%) and El Confidencial, to the hard ones (60.89%).

Among the topics that more frequently entered the *hard news* category were national and international politics, corruption and nationalisms. The economic issues alternated between *hard* and *soft* categories, something that also happened with employment and natural disasters.

Additionally, the results showed that hard contents outstripped soft contents in terms of evolution and permanence on homepage (62.2% against 37.8%), which confirms the greater adherence of these treatments to the agenda proposed by the media. The content position on digital news media homepages also offered unequivocal clues on professionals’ propensity to prioritize hard treatments

on this agenda. That way, the higher the position that a topic has on the homepage agenda, the higher the probabilities it receives a hard treatment, and conversely.

In all the ranking positions of the most read topics, the soft contents always impose in comparison to the hard ones, which consequently confirms the dissonance between the treatment of issues that professionals select and the issues the audiences prefer to read, watch or listen to.

3.5. Participation metrics associated to issues

El Mundo and El País were the digital news media whose homepage topics connected in a more prolonged way with the terms and hashtags that comprised the “trending topics” on twitter. El Confidencial and, especially, El Diario, obtained more discreet figures. El País stands out with the highest number of generated comments, followed by El Mundo and El Diario (each one relatively near), and El Confidencial.

Chart 4. *Aggregated and median values of the associated minutes as trending topics on Twitter and the generated comments due to the topics present on the homepage agenda of each digital news media.*

	EL PAÍS		EL MUNDO		El Confidencial		eldiario.es <small>Periodismo a pesar de todo</small>	
	Homepage		Homepage		Homepage		Homepage	
	Sum (Σ)	Median (Med)	Sum (Σ)	Median (Med)	Sum (Σ)	Median (Med)	Sum (Σ)	Median (Med)
Minutes as Trending topics on Twitter	206.300	505	207.999	490	191.530	463	155.695	470
Comments	351.334	124	115.018	63	18.824	13	59.464	46

Source: our own elaboration.

The hard topics got, on every newspaper, more minutes as *trending topics* on Twitter than the soft topics, a datum that can be appreciated on both the homepage agenda (530 against 440 minutes) and on “the most read” agenda (695 against 520 minutes). For their part, the comments show a similar behavior: in both agendas more comments were posted when the treatment was hard than when it was soft. The Mann-Whitney test confirms there are statistically significant differences between the two treatments and the minutes of conversation (Sig. =0.003) as well as between the two treatments and the associated comments (Sig. =0.000), always higher for the hard contents.

Addressing the thematic and treatment of the analyzed topics, there is a certain order on the homepage topics whose associated terms managed more minutes of conversation on Twitter. That way, the topics typically treated as soft content were the ones that got more minutes. The only exceptions are represented by hard topics such as international politics, nationalisms and national politics that, even though they also obtained notable median values as *trending topics*, they did in a lower proportion. However, when considering the topics present on “the most read” agenda, we observed how the topics that got more minutes on Twitter were those repeatedly treated as hard.

Related to the generated comments according to every collected topic on the homepages, the hard political issues (nationalisms and international politics) were the ones that more comments sparked,

even when some soft contents stood out due to their median values (health, equality, leisure, science and technology and social chronicle). For their part, the collected comments on “the most read” agenda highlighted again the relevance of the hard topics. Around three out of four topics got their comments median values incremented in relation to the ones gotten by the same topics on the homepage agenda.

For their part, the issues that remain on the homepage obtain more aggregated and median minutes as “trending topics” on twitter than those that receive less continuous attention and disappear. Likewise, the median values of minutes as *trending topics* of the issues that remain on the homepage can increase 22.1% if these topics enter “the most read” agenda. The Mann-Whitney test (Sig. =0.000) confirms there are statistically significant differences between the permanence and evanescence on homepage and the minutes of conversation associated with them, that are always higher for the contents that remain.

Chart 5. *Aggregated and median values of the minutes of conversation as trending topics on Twitter of the associated terms to the topics present on the homepage agenda and those homepage topics whose pieces coincide with “the most read” agenda, according to their permanence on the four digital news media.*

		Minutes as <i>trending topics</i> on Twitter			
		Homepage		Homepage topics whose pieces coincide with the ones of “the most read” agenda.	
		Sum (Σ)	Median (Med)	Sum (Σ)	Median (Med)
Permanence	Remains	538.974	688	445.219	840
	Disappears	222.550	385	115.975	495

Source: our own elaboration.

On the same token, the issues that remain on homepage obtain a higher number of comments in median terms than those that disappear. That way, the median figures of comments on the homepage increase a third (33.3%) if the associated terms to the topics coincide with *trending topics* on Twitter and even double (82.2%) if some of their pieces coincide with the ones present on “the most read” agenda.

Chart 6. *Aggregated and median values of the generated comments based on the topics present on the homepage agenda and based on the homepage topics that coincide with the trending topics on twitter and with “the most read”, according to their permanence on the four digital news media.*

		Comments					
		Homepage		Homepage topics whose associated terms coincide with the <i>trending topics</i> on Twitter.		Homepage topics whose pieces coincide with the ones of “the most read” agenda.	
		Sum (Σ)	Median (Med)	Sum (Σ)	Median (Med)	Sum (Σ)	Median (Med)
Permanence	Remains	141.504	45	117.601	60	121.970	82
	Disappears	111.036	30	59.128	40	51.678	69

Source: our own elaboration

Finally, regarding the time-slot, the emerged topics from 9:01 hrs to 15:00 hrs got subtly higher figures than in the rest of time-slots in the day.

4. Discussion and conclusions

The studied digital news media exhibit a more sensitive homepage agenda to citizen participation, which translates into a more lasting relevance for those journalistic issues that coincide with the most read on the website or the *trending topics* on Twitter. The topics that professionals select receive a journalistic attention and more permanent relevance when they have synchronicity with the issues that citizen participation makes noticeable through light participatory ways –the aggregation of “the most read” classifications- or even with the profiled topics on sites that promote a denser participation –through metrics related to the sparked conversations on the comments of digital news media or the ones that become *trending topics* on Twitter-

Therefore, it can be considered as confirmed the first hypothesis of this research. The topics present on the homepage agendas that remain until the next studied time-slot are more abundant when their associated terms are among the trending topics on Twitter, and the proportion is even greater when their pieces coincide with “the most read”. Out of the topics that remain on the homepage, the majority ends up as a *trending topic* on Twitter or as “the most read” issues. Inversely expressed, the *trending topics* and “the most read” issues instigate more lasting homepage topics than the topics that do not meet any of these two conditions. That way, the majority of ephemeral topics won’t get to be “trending topics” or have a position among “the most read”.

Our analysis reveals that the studied digital news media group presents a homepage thematic offer that generally matches with the most read topics by their audience clusters. However, despite this apparent interagenda correspondence and homogenization, each of the four newspapers delivers distinctive news offers in accordance with their editorial and identity marks.

In relation to the topics presence on Twitter, the digital news media from a printed matrix seem to influence more or adjust their news value criteria better, according to the interest of this social network users because practically half the proposed issues on their homepages had some kind of social impact in the form of *trending topics*. The agenda comprised of the most read make the readers of El Diario the audience that best outlines what topics spark conversations on social networks, with some distant from the figures that comprised the most read topics on El Mundo, El País and El Confidencial.

El Diario and El País are the most effective digital news media when setting their readers agenda because their homepage topics are the ones that filter in more into their respective agendas of “the most read”. The readers of El País outline, with their readings, the agenda that registers more coincidences in relation to the homepage. For its part, the audience that defines “the most read” agenda on Eldiario.es differentiates for pointing out best what issues will become *trending topics* on Twitter.

Regarding the second hypothesis, the news gap that separates the news treatments offered by professionals from the ones requested by the citizens prevails. The treatments from the homepage agendas group perpetuate an evident news gap: professional criteria privileges hard contents while soft contents impose on “the most read” agenda.

While the homepages compensate hard and soft treatments equitably, two out of three issues of “the most read” agenda are soft. Our study reveals that the prioritization or position of every homepage

topic exhibits indications about this news treatment: on the first positions of these agendas professionals placed harder topics and, as the positions were descending, the soft contents gained relevance. In contrast, soft contents are always more abundant on every position on “the most read” agenda. According to our results, the issues that receive hard news treatments remain and consolidate better on the homepage agenda than the soft ones.

Hard topics achieve greater participatory metrics than the soft ones. The news treatment becomes, this way, in a catalyst factor of participation, in concomitance with others like permanence and homepage position, the coincidence with the studied citizens’ agendas and the publishing schedule. It is the hard topics that capitalize on the comments and the conversation in a greater extend over the group of homepage issues that become *trending topics* on Twitter. Therefore, the third hypothesis proposed is refuted. Our data sustain that a topic obtains better participatory metrics when it meets one or several of the following conditions: (1) it receives hard treatment; (2) it remains on the homepage; (3) it is placed on a high position on the homepage; (4) it enters “the most read” agenda; (5) it coincides with the *trending topics* on Twitter or; (6) it is published in the morning time-slot. The combination of several of these circumstances contributes to multiply these participatory figures cumulatively.

Both on the homepage and “the most read” agenda topics that receive a hard news treatment add more aggregated and median comments and minutes of conversation on Twitter than soft topics, especially on “the most read” agenda prone to soft treatments. The homepage topics that obtain better metrics, as trending topics, are social issues, sports and people (topics that receive soft treatments), which is paradoxical for an agenda controlled by professionals that balance hard and soft treatments. It is not less surprising that on “the most read” agenda the topics that achieve higher median figures of minutes as “trending topics” on Twitter are typically hard, such as economy or international politics.

As for homepage collected comments, hard topics as nationalism and politics are the ones that spark a greater number of comments, which is why they could be considered the leading promoters of debate on the studied digital news media. Specifically, the homepage agendas proposed by two studied digital news media from a printed matrix, El País and El Mundo, are the ones that connect over more minutes with the terms and hashtags of the “trending topics” on twitter. Likewise, both newspapers exhibit the highest median figures of comments on their homepage topics which shows their large commentary communities.

Professionals should evaluate with interest the participatory catalyst factors on their agenda building process, since at sight of the obtained data on participatory metrics; the hard news treatments that adjust best to professionals’ criteria do honor the audiences’ interests that converse through comments on the website of the digital media or on Twitter. Therefore, even though the news gap is still present with the majority of readers, our results back up the idea that professional criteria builds bridges that solve this gap partially, at least with the most active part of the audience.

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AUTHORS:

Pedro Luis Pérez Díaz

San Antonio Catholic University of Murcia. Spain.

(Murcia, 1986) has a degree in Journalism and a PhD. in Communication from Universidad Católica San Antonio de Murcia (UCAM), where is part of the Communication, Politics and Image Research Group. Among his lines of research he has privileged the journalistic mediation on social media and the participation on digital journalism, objective of study of his doctoral thesis. After obtaining a training scholarship as a researcher staff member of Fundación Séneca, Agencia de Ciencia y Tecnología de la Región de Murcia, he has carried out his teaching and researching activity in different national and international prestige university centers such as The Stanford University (USA) and the University of Florida (USA). Likewise, he has participated in diverse projects R&D: a competitive regional one financed by Fundación Séneca, related with political communication, social media and young people, and another national one, related with accountability and the transparency on the digital local administration ambit. He is currently a professor in the Communication and Tourism Degree at UCAM, apart from being the coordinator of the master's degree sports journalism taught at this university.

plperez@ucam.edu

H Index: 4

Orcid ID: <http://orcid.org/0000-0003-1104-0262>

Google Scholar: <http://scholar.google.es/citations?hl=es&user=JkohSXAAAAAJ>

Enrique Arroyas Langa

San Antonio Catholic University of Murcia. Spain.

With over six years of recognized active research by the CNEAI (2006-2014), Enrique Arroyas Langa (Valencia, 1966) has a degree in Information Sciences from the Universidad de Navarra and a PhD. in Communication from Universidad Católica San Antonio de Murcia. Since 2003, he is a professor at UCAM Communication Faculty, where, besides teaching subjects related to Journalistic Composition and Specialized Journalism, he is the principal of the Expert in Political and Institutional Communication Degree. He has a consolidated career in the study of journalistic mediation on social media, typically seen from the prism of the theory of journalism in his facet as a configurator of public opinion. As a member of the Communication, Politics and Image Research Group, his line of research has been focused on the journalist role as an opinion leader and the quality of open debate to the public participation (with articles such as 'The conversation on political issues on Twitter', 'Twitter y la prensa: dos relatos sobre la 'ley Wert' y 'Del des-contexto al descontento: agenda y discurso de la prensa durante las elecciones autonómicas en la Región de Murcia').

earroyas@ucam.edu

H Index: 4

Orcid ID: <http://orcid.org/0000-0001-6578-1571>

Google Scholar: <http://scholar.google.es/citations?user=9cZPGhAAAAAJ>

Rocío Zamora Medina

University of Murcia, Spain.

University Titular Professor of the Journalism area, Rocío Zamora Medina (Murcia, 1972) is a Doctor in Public Communication from Universidad de Navarra and since 2012 is part of the Communication Faculty at Universidad de Murcia, where she teaches Information and Communications Fundamentals. She was a Journalism professor at UCAM for over 15 years, where she worked as Vice-dean of Journalism. She stands out for her experience as an undergraduate and postgraduate international professor in more than 15 European and American universities. As a researcher, she focuses her research mainly in the strategic analysis of electoral campaigns on online contexts and their effects on the public's opinion shaping. A great deal of her researches are gathered in a little more than a score of articles published on magazines of national and international impact, as well as half a hundred of books chapters and several books of Political Communication ambit. She has participated in numerous competitive research projects, being part of three research groups: in Communication, Politics and Image (UCAM), Cyber-demography (UCM), and Communication, Culture and Technology (UM). She has six years of active research and is an active member of different international professional associations, apart from being an evaluator of several magazines.

rzamoramedina@um.es

H Index: 10

Orcid ID: <http://orcid.org/0000-0002-0541-2456>

Google Scholar: <http://scholar.google.es/citations?user=uhqk4acAAAAJ&hl=en>