# COMMUNICATION & SOCIETY

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Submitted May 24th, 2019 Approved April 21st, 2020

© 2020 Communication & Society ISSN 0214-0039 E ISSN 2386-7876 doi: 10.15581/003.33.4.155-168 www.communication-society.com

2020 - Vol. 33(4) pp. 155-168

#### How to cite this article:

Sánchez Gonzales, H. & Sánchez González, M. (2020). Conversational bots used in political news from the point of view of the user's experience: Politibot. *Communication & Society,* 33(4), 155-168.

### Conversational bots used in political news from the point of view of the user's experience: Politibot

#### Abstract

The production and distribution of news is changing. At the same time, the relationship between journalism and artificial intelligence systems is becoming stronger. Within this context, conversational bots have appeared, which are software applications that distribute personalised content (Al Johri et al., 2016) through social networks, online instant messaging apps, and mobile devices. This research presents a case study on the conversational political news bot known as Politibot, which is a pioneering, successful Spanish project that emerged during the 2016 election campaign. The study analyses users' perceptions of the bot as a news and conversational tool based on their experience of use. An experimental methodology has been used in combination with other qualitative and quantitative research techniques (documentary analysis, direct observation, registration forms, as well as pre-test and post-test by means of questionnaires). The results show widespread acceptance in terms of reliability, comprehension, and the format regarding the information received from the bot, as well as its immediacy and customisation. However, the possibility of interacting with bots is still limited, which is also true of the case under study herein.

#### Keywords

Robot journalism, chatbot, mobile journalism, innovation, audiences, political news.

#### 1. Introduction and state of the issue

Innovation in publishing is part of the strategy of most digital editions and native online media, including those in Spain. In an ecosystem of multiple broadcasters, information saturation, disinformation, and Fact Checking (Coddington *et al.*, 2014; Nyhan *et al.*, 2016), the goal of meeting the demands of users by offering innovative, high quality journalistic content and offering options for their participation in such content is essential for the survival of media companies today.

Some media are relying on the creation of systems aimed at content curation and detecting fake news online (Sánchez, Palomo & Sánchez, 2017). In many of these media, labs have emerged with specialised journalists and developers oriented toward the creation and experimentation with interactive digital content, multimedia strategies, and transmedia configurations by using formats and narratives typical of digital culture (Sádaba & Salaverría, 2016). This has resulted in the emergence of data visualisations (transformation of data into

information that can be understood by the user with the aid of graphics) (Cariro, 2011), multimedia reports, webdocs (interactive documentaries) (Gaudenzi, 2009; Scolari, 2013), and newsgames (where the game is assumed to be part of the narrative structure) (Frasca, 2013). These are included among other options in which the information is presented in an attractive way, and gamification is even employed for user engagement.

In contrast to this content, which is rather artisanal, robotics and artificial intelligence systems have opened up innovative possibilities in the production and consumption of news, a type of convergence of journalism and technology (Lewisand & Usher, 2013). This is known as Robot Journalism (Anderson, 2012, 2013; Lemelshtrich, 2015; Carlson, 2015), which from its origins has mainly been used as a "news-generating machine" (Sánchez & Sánchez, 2017) through the so-called newsbots, which are software applications used for gathering facts and writing news in record time, once the selection of criteria by the user has been carried out. There are many analyses that have focused on the application of bots in politics, economics, sports, and services, among others. They have been used in media such as The Guardian, which was one of the first to develop the technology around 2010 (Bunz, 2010), as well as Forbes, Le Monde, The Los Angeles Times, and NBC News, among others (Sainz/Vocento Media Lab, 2016). However, only a scant amount of work has been carried out to measure user experience (UX) involving bots. UX applies the principles of usability to evaluate the ease of use of interfaces (Nielsen, 2012). This is a phase of journalistic post-production where instead of adding more features to the format, they are removed to optimise consumption (Soberman, 2013).

More recently, thanks in part to the widespread use of smartphones, which have brought about sociological changes in users (Ling & Haddon, 2003; Oksman & Rautianen, 2002), together with the combination of information technology and automation (Manovich, 2013), we have witnessed a new stage of Mobile Robot Journalism. The potential of this new phase beyond the mere production of news lies in its personalised distribution and conversational capabilities with audiences through instant messaging applications via mobile phones, such as Telegram, WhatsApp and even Facebook Messenger (Sánchez & Martos, 2018), which already have a high level of penetration in several countries (IAB Spain, 2017). These are the so-called chatbots, or conversational bots, which are applications that distribute personalised content in the form of chats with users. Compared to previous versions (similar to online editions in terms of content and participation options (Martín, 2009; Sánchez, 2011), this second generation of newsbots (Johri et al., 2016), along with the new mobile journalism, are taking advantage of the possibility of omnipresent, permanent connection in order to establish a closer and more personalised relationship with audiences (Aguado & Martínez, 2006; Sánchez, 2012). Although media companies previously invested in creating and updating their own news apps (Sánchez-González, 2011, 2013), nowadays they have found "off-the-shelf programmes that are much more agile and productive", which can also be configured more or less easily and quickly (Pachico, 2016).

As pointed out by Sánchez and Sánchez, "with the idea of the *daily me*, a term coined decades ago, Negroponte's prognostication seems to be coming true with these bots" (Sánchez & Sánchez, 2017), regarding the fact that bots can be employed to provide users with content according to their preferences of subject matter, author, or the events taking place around them by using screening systems involving keywords or geolocation. Moreover, in a type of gamification strategy, they also offer the possibility of interacting with readers and boosting citizen participation by offering attachments ranging from emoticons to multimedia files. In addition, citizens and journalists themselves might be able to filter information or check its veracity through dialogue via mobile phones. Such dialogue takes place in a natural and technically familiar conversational environment for users where a media company becomes another WhatsApp, Messenger or Telegram contact, as pointed out by Eduardo Manchón (2016).

One of the fields in which chatbots (still in the experimental phase) have had the most extensive application so far has been with political news. As such, in 2016 this technology enabled media such as The Washington Post, The Huffington Post and CNN, among others, to provide extensive, real-time coverage of the US elections that resulted in a victory for Trump.

In Spain, media companies and certain groups have already carried out several experiments with chatbots. Thus, *eldiario.es* has been using this type of app through Telegram since March of 2016, after it carried out a test during the 20D general elections (20 December). The media group Vocento is another organisation that has chosen to create chatbots in its lab as well (Pérez, 2017; Sainz/Vocento Media Lab, 2016). Similarly, as part of the most recent trend in entrepreneurial journalism, start-ups have emerged with their main activity being to report on politics through chatbots.

This is the case of Politibot as well. It is a conversational bot that specialises in political content, also via Telegram. The bot was launched by an interdisciplinary group of professionals, including three journalists (María Ramírez, Eduardo Suárez and Martín González) in order to cover the June 2016 election campaign in an innovative way (Sánchez & Sánchez, 2017). Since then, Politibot has offered relevant information that is personalised and close to the user with regard to international events, such as the Brexit referendum, the US elections with Trump's victory, the attack in Barcelona in August of 2017, the Spanish elections in 2019, and so on.

The essence of the bot, as described in their usage policy, is as follows: "It's just like a conversation the same as ever, with the advantage that I don't have a love life, so I'm not going to bore you with that topic" (Politibot, 2017). Aimed at a young audience that is familiar with online communication and digital culture, part of Politibot's publications include graphics, photographs, animated gifs, and audio through podcasts produced together with Cuonda.com, an independent Hispanic podcasting start-up. Depending on the response of each user, it also provides additional personalised information, such as links to news, blogs and studies. The bot received the support of Google's Digital News Initiative (DNI) for the second time at the end of 2017. As described in detail on its website, these resources allow it to finance the development of journalistic tools in messaging applications such as Telegram and Facebook Messenger.

The bot is an example of innovation and success, the analysis of which can be useful for professionals themselves in addition to the news media. We have carried out this study in several phases within the framework of an R&D&I research project:

The first phase focused on audience assessment of the chatbots as a news service. Next, it was discovered that the informational quality and emotional connection with users regarding the news received were the main strengths of the tools, which have presented an opportunity for journalism.

Based on these results, the second phase was carried out, which comprises the focus of this article. It involved performing an experiment on users' consumption of Politibot in order to gather the perceptions that audiences have of its content and way of communicating, as well as the interaction it provides them.

Although we have found recent analyses regarding algorithmic political communication (Campos & García, 2018) specifically related to bots and politics, most of these studies have focused less on its informative potential, which is the strength of Politibot, and more on its use as a tool at the service of political communication and part of the new scenario of technopolitics. Thus, Gutiérrez Rubí (2016) has made a compilation of cases, including the Oxford Internet Institute study (Woolley & Howard, 2017) on the use of bot networks to manipulate public opinion in social networks during elections. The study on bots and social networks used during the Trump campaign (Persily, 2016) is noteworthy. As bots are capable of generating conversation, they are a valuable relationship tool and useful from a sociological and public opinion point of view in order to discover the interests and behaviour of citizens,

or even to detect voting trends and predict results (Gutiérrez Rubí, 2016). This technology has also been exploited by political actors themselves, who sometimes use apps to search for followers, generate web traffic, automate publications on social networks, or for other applications related to marketing and political competition.

Regarding the use of chatbots in journalism, studies are quite recent and nearly always provide an exploratory and comprehensive view of these tools. Some of the analyses offer classifications according to the way they are used in the media (Lokot & Diakopoulos, 2015), but most focus on significant cases in diverse media, analysing either their implications for the journalistic profession (Thurman *et al.*, 2017; Clewall, 2014), for the companies themselves, or the technological aspect (Dörr, 2015). However, chatbots have hardly been addressed from an audience perspective, and even less in terms of the audience's perception of their usefulness and of their own experiences of interaction and conversation. Thus, we consider to be useful and innovative.

#### 2. Objectives and methodology

This research analyses the perception that users have of Politibot based on their experiences of consumption through the mobile phone. As described further along, a group of university students and communication professionals was chosen as subjects of the analysis due to their age, since apart from being accustomed to the consumption of online news via the mobile phone, the target audience of Politibot and its user profile is focused on young people (Suárez, 2016).

The specific objectives of this study are as follows: a) to identify the interest in political news and the level of knowledge and previous use of Politibot among the subjects analysed; b) to determine, based on their experiences using Politibot, their assessment of the layout of the tool (efficiency and aesthetics), of the content disseminated (news selection criteria, journalistic style, characteristics of the information, and multimedia formats), and of the personalised interaction provided to the users by the robot.

We began the study from the hypothesis that young people are not aware of political news distributed by bots through the Telegram instant messaging app, which is the case of Politibot. However, after using the programme, they adapt quickly due to its immediacy, personalisation and interaction.

In order to meet the objectives, the case study method has been used (Yin, 1998; Coller, 2000; Lune, 2004; Rossman, 2014), as it is based on inductive reasoning and investigates a phenomenon that is contemporary and real. It uses multiple sources to verify a singular or specific investigation of a particular study (Yin, 1998). Thus, the following qualitative and quantitative research techniques have been used:

- 1. The state of the issue on the automation of political news processes using bots (Gutiérrez Rubí, 2016; Woolley & Howard, 2017; Sánchez & Sánchez, 2017; Campos & García, 2018).
- 2. Direct observation technique of the researcher (Fernández-Ballesteros, 2004), systemised to interact with the bot during a three-month period (from 9 February to 9 May), and to develop the users' test (pre and post) and the guidelines for the experiment. The observation units employed to record the information were the news headlines distributed by the bot (n=41). In addition to time control, we have taken into account other indicators such as the type of news, topic, country of origin of the type of question employed by the user to access the information: direct (formulated in a clear way), or indirect (formulated in a concealed way), and according to the topic: a) opinion (it tries to discover the criteria and opinion of the user); b) attitude and personality (it assesses identity); c) general knowledge (it assesses the general

educational level; and d) evaluative (it assesses whether the user wants to receive more information).

3. The experimental method (Gunter, 1996) was carried out in two phases during the months of March and May of 2017, and 215 tests were given to students and communication professionals from the Faculties of Communication in Seville and Malaga. A pre-test with 14 questions was carried out with a sample of 112 participants to gather information regarding their use and knowledge of Politibot. Five variables were included in a news item extracted from the bot (Dutch political news) to determine the level of interest in political information: I would like to be kept informed; I am not interested in politics; I do not understand the news; the text is well written; or the images complement the information and make the text more understandable.

The second phase took place 15 days after the users surveyed had used the bot (from April 17th to May 31st). A total of 103 subjects responded to the 10-question post-test regarding their experience using the bot. In order to cross two categorised variables, the Chi-square test of independence was used to determine the existence or absence in the response variable among the factorial categories (sex, age<sup>1</sup>, users and non-users –the latter being those who answered, "I haven't used it yet"<sup>2</sup>). When N was less than 20, this method was replaced by the Binomial Test. The Mann-Whitney U-test (non-parametric) was used to determine the quantitative response variables of the difference between two means. For the questions in which the respondent could mark more than one answer on the list provided, a dichotomous variable (yes/no) was generated for each of those answers.

For open ended and qualitative responses written by the participants, depending on their content, a series of categories and subcategories were created (21 in total), which have allowed us to classify them individually. However, the same answer from an interviewee, depending on its content, could be placed in more than one category, depending on its classification as follows:

a) news value (Warren, 1966; Martínez, 1989; Martini, 2000); novelty, originality/ immediacy, importance and seriousness, future development of events, geographical proximity: b) style (Vivaldi, 1981; Martínez, 1993; Muñoz, 1994); accuracy, ease of use, clarity, attractiveness, conciseness, originality, variety, density, naturalness: c) layout (Hassan, 2015); efficiency and aesthetics: d) interaction (Hassan, 2015): e) information: customised, verified, includes humour, and biased.

When this stage was completed, 21 dichotomous variables were generated (presence/absence), one per category, which have been crossed according to the explanatory factors considered above (gender, age, users, and non-users) by means of the Chi-square test already used in previous contrasts.

#### 3. Analysis and results

The information distributed by Politibot in the period analysed (3 months/n=41) is mostly of an international nature 82.92% (34), compared to national news, which stands at 17.07% (7). If we consider the country from which the news originates, France is in the first position with slightly less than a quarter at 24.39% (10), followed by the USA at 17.07% (7), and Spain, also with 17.07% (7). In third and fourth place are England 14.63% (6) and the Netherlands 9.76% (4),

<sup>&</sup>lt;sup>1</sup> The age distribution in the established categories is not very homogeneous: 86.6% are between 18 to 25 years old, 10.7% are between 26-40 years old, and only 2.7% of the respondents are over 40 years old. Therefore, it was necessary to combine the last two categories, leaving the variable dichotomized at the age of 25.

 $<sup>^2</sup>$  This is the key variable. It allows participants to be classified as users *vs.* non-users. In this dichotomy, with this sample of 103 people, 16.5% say they have not used Politibot, and therefore, 83.5% of the sample are users.

respectively. Turkey at 7.32 per cent (3) is in fifth place, and others (Venezuela, Germany, Hungary, etc.) are in the last position with 2.44 per cent (1), respectively.

In terms of the most prominent political figures in the news, Donald Trump ranks first with 47% compared to Emmanuel Macron, who ranks second at 13%. These leaders are followed by Marine Le Pen, Carmen Chacón, Susana Díaz, Barack Obama, Theresa May and Recep Tayyip Erdogan, with 7% respectively. The issues addressed by the bot during the period of analysis focused mainly on elections in different countries, which included Holland, Spain, France, The United Kingdom, etc., with 43.90% (18). In second place are social policy issues at 12.19% (5) and standing at 9.75% (4) is news related to Brexit, Trump's management, and terrorist attacks, respectively. Finally, self-coup/corruption and referendums stand at 7.31% (3).

Politibots inform and interact with users in more than half the content (65.85%) (27), with questions it poses in the conversation, as opposed to 34.34% (14) of the content where it is not involved. The most common questions are of the indirect variety at 85.36% (35), compared to direct questions at 14.63% (6). According to the subject matter, the most frequently used questions are related to opinion 37.03% (10): (Hello, human. Last night the second presidential debate was held in France. So, can I tell you how it went)? Questions regarding knowledge are in second place at 29.62% (8): (Hello human! Today is Europe Day. Do you know why it's celebrated today?). Finally, assessment questions stand at 14.81% (4): (Hello, human. Donald Trump ordered the bombing of Syria this Thursday. Do you want to know more about it?)

### 3.1. Objective 1. Interest in politics, degree of knowledge, and previous use of Politibot among the individuals studied

Less than a quarter of the participants, 23.2% (26 out of 112), said they knew about Politibot beforehand, and the vast majority of these, 93.8% (105), had not used it previously. If we take into account gender and age, slightly more males (24.5%), and especially those over 25 years of age (33.3%) (X2 V = 0.99, p = 0.319), knew about Politibot compared to females (22%) (X2 V = 0.10, p = 0.755).

After reading the news item on current affairs in the Netherlands extracted from the bot, nearly all the participants (97.7%) said they were interested in obtaining more information. This is due to the way the bot interacts through questions, and in this case, the interrogations were of the opinion type. When crossing data between genders, a statistically significant difference can be seen (Table 1) (p<.05). For males, the news story raises interest (60.4%), but not the political aspect, even when the text is well written. By comparison, females state that they do not understand the news 13.6%, but that the images act as a complementary aid to comprehension.

**Table 1**: *Inferential analysis*. Differences in the perceived impact after reading the news, according to gender (N=112). Phase 1.

	Gender		Contrast test	
Variable	Males	Females	Chi <sup>2</sup>	Р
	(n=53)/	(n=59)	value	value
1. I would like you to keep me informed	60.4% (32)	37.3% (22)	5.96 *	.015
2. I am not interested in politics	24.5% (13)	18.6% (11)	$0.57 \ ^{\rm NS}$	.449
3. I do not understand the news	7.5% (4)	13.6% (8)	1.06 <sup>NS</sup>	.304
4. The text is well written	13.2% (7)	6.8% (4)	1.30 <sup>NS</sup>	.254
5. Images complement the news and make the text more understandable	26.4% (14)	33.9% (20)	0.74 <sup>NS</sup>	.390
6. Does not Know / No answer given	3.8% (2)	10.2% (6)	1.72 <sup>NS</sup>	.189

Source: Own elaboration.

N.S. = NOT significant at 5% (p>.05) \* = Significant at 5% (p<.05). Numbers in **bold** are the categories where significance is observed (residue =>2).

According to age, there is a statistically significant difference (p<.05) in assessing whether the text is well written. Respondents over 25 years of age consider the texts to be of high quality (26.7% *vs.* 7.2%) (X2 V= 5.55, p = 0.18). Likewise, those under the age of 25 who are not interested in politics (23.7%) say they do not understand the news (12.4%), and that the images complement understanding of the text (32%).

## 3.2. *Objective 2. Evaluation prior to using the tool of its functionality, disseminated content, and customised interactions provided by the bot to users*

A total of 74.8% (103) report that Politibot helps to keep them informed. If we cross the data by gender, it has been verified that women (78.9%) have a more favourable opinion than men (69.6%) (X2 v= 1.19, p=.276). With regard to age, the youngest (>25) are more inclined to receive news from the bot (77.3%) (X2 v= 2.03, p=.155). We also found a significant difference between those who claim to consume news in real time (81.4%) compared to non-users (41.1%), a relevant figure at p<.01 (value: 12.17; p=.000).

Nearly half of the respondents (44.7%), mainly women (49.1% of the previous percentage) and individuals under 25 years of age (46.6%) find the information provided by the bot (Table 2) to be appropriate, as it provides a summary and opinion of the news. The use of graphics and multimedia elements, including podcasts, has also been assessed. There is a slight difference in favour of men (37.0% *vs.* 32.1%) and people over 25 years of age (35.7% *vs.* 34.1%). Along the same lines, it has also been verified among users (41.2%) and non-users (9.3%) with a high level of significance (p<.01) that the bot allows personalisation of the information, and a positive view of the summary and opinion provided by the bot shows statistical significance (p<.05) (51.2% *vs.* 17.6%).

**Table 2**: Inferential analysis. Differences of opinion about whether the informationreceived is satisfactory and personalised, according to users and non-users (N=103).Phase 2.

	Group		Chi-square test	
Variable	Users (n=86)	Non-users (n=17)	Chi <sup>2</sup> value	P value
1. The information is biased according to certain interests	10.5% (9)	23.5% (4)	2.20 <sup>NS</sup>	.138
2. It is appropriate because it offers a short summary and an opinion	51.2% (44)	17.6% (3)	6.43 *	.011
3. The quality of the news should be improved as well as the conversational tone.	26.7% (23)	11.8% (2)	1.73 <sup>NS</sup>	.188
4. Understanding the news is facilitated by graphics, multimedia formats, and podcasts, and conversation is encouraged as well	37.6% (32)	17.6% (3)	2.51 <sup>NS</sup>	.113
5. It allows the information to be customised	9.3% (8)	41.2% (7)	11.59 **	.001
Source: Own elaboration.				

N.S. = NOT significant at 5% (p>.05) \* = Significant at 5% (p>.05). Numbers in **bold** are the categories where significance is observed (residue =>2).

Another factor that has been evaluated is the functionality of the menu in different categories, as well as the interface it uses (Table 3). When screening the results, it is significant (p<.o5) and bears mentioning that people under 25 years of age and women (50.0% vs. 35.0%) (X2 v= 1.96, p=.161) are the ones who mostly assure that the bot works well because of its interface. A total of 42.7% of respondents said that the bot responds to current political issues, but its answers are somewhat limited, and its main topic is elections in different countries (43.90%).

<b>Table 3</b> : Inferential analysis. Differences in opinion about the category menu and the
Politibot interface, according to age (N=86 users). Phase 2.

Age		e	Chi-square test		
Variable	<b>18-25 years of</b> <b>age</b> (n=75)	More than 25 years of age (n=11)	Chi <sup>2</sup> value	P value	
1. The menu is not suitable because it has a limited vocabulary	4.0% (3)	18.2% (2)	3.52 <sup>NS</sup>	.061	
2. It works well. It uses an interface that allows the language to be understood	48.0% (36)	9.1% (1)	5.93 *	.015	
3. It is limited, but later when I ask about current political issues, it answers	49.3% (37)	54.5% (6)	0.10 <sup>NS</sup>	.747	
4. I feel frustrated by the interface when it misunderstands my actions	12.0% (9)	9.1% (1)	0.08 <sup>NS</sup>	.779	

Source: Own elaboration.

N.S. = NOT significant at 5% (p>.05) \* = Significant at 5% (p>.05). Numbers in **bold** are the categories where significance is observed (residue =>2).

When contrasting the numerical variable<sup>3</sup> regarding the use of bots, according to users and non-users (Table 4), there is a significant difference (p<.05) in "the verified news provided" by the bot and in the fact that it "reacts with a sense of humour when you try to annoy it," and this is highly significant (p<.01) when it complements the information with graphics and multimedia. There is a certain tendency by females to receive notifications with information of interest as opposed to those under 25 years of age.

Table 4: Inferential analysis. Significant differences in aspects related to the use of
Politibot, according to users and non-users (N=103). Phase 2.
Mann-Whitney

Variable: Mean values (Standard deviation)	Group		Mann-Whitney Test	
	Users (n=86)	Non-users (n=17)	Value	P value
1. It provides verified information	2.24 (0.57)	1.82 (0.81)	2.26 *	.024
2. It complements the information with graphics and multimedia	2.35 (0.66)	1.71 (0.59)	3.47 **	.001
3. It establishes a connection with the user regarding current events and other interests	2.16 (0.68)	1.88 (0.78)	1.44 <sup>NS</sup>	.149
4. It reacts with humour when you try to upset it	2.15 (0.80)	1.65 (0.61)	2.43 *	.015
5. It offers the possibility of receiving notifications with information of interest	2.27 (0.60)	2.00 (0.87)	1.25 <sup>NS</sup>	.212

Source: Own elaboration.

N.S. = NOT significant at 5% (p>.05) \* = Significant at 5% (p>.05) \*\* = Highly significant at 1% (p<.01). Numbers in **bold** indicate categories

where the average is significantly higher.

In the criteria for selecting news and writing style, those surveyed rank novelty (75.5% of users) and originality/immediacy (54.3%) above the remaining news criteria. With regard to style, accuracy (33%) and ease of use are the most highly valued (30.9%). These are followed at some distance by clarity (17.0%) and attractiveness (11.7%). With regard to efficiency in layout, interaction with the user, and customised information, these aspects attain high percentages (53.7%, 53.6% and 60.7%, respectively). By crossing the variables between users and non-users, there is a high rating with regard to news value (Table 5): importance and seriousness (significant at p<.05) is the most frequent response, curiously among non-users (40% *vs.* 10.7%); interaction (significant at p<.05) appears much more frequently among users (53.6% *vs.* 20%); attractiveness is the most commonly chosen style among non-users (nearly significant at p<.10) (30% *vs.* 9.5%), as well as efficiency in the layout due to the high percentage (57.1% *vs.* 30%).

<sup>&</sup>lt;sup>3</sup> On a scale of 1-3 from low to high level of importance.

Group **Chi-square test** Variable Users **Non-users** Р Value (n=84) (n=10) value 0.12 NS News value: novelty 75.0% (63) 80.0% (8) .728 0.00 NS Originality / Immediacy 56.0% (47) 40.0% (4) .338 6.43 \* Importance and seriousness 10.7% (9) 40.0% (4) .011  $0.03 \ ^{\rm NS}$ .859 Future development of events 11.9% (10) 10.0% (1) 0.76 <sup>NS</sup> Geographical proximity 7.1% (6) 0.0% (-) .382  $0.04^{\text{NS}}$ Style: 33.3% (28) 30.0% (3) .832 Accuracy 0.00 <sup>NS</sup> Ease of use 31.0% (26) 30.0% (3) .951  $0.07 \ ^{\rm NS}$ 16.7% (14) 20.0% (2) .791 Clarity  $3.63 \ ^{\rm NS}$ Attractiveness 9.5% (8) 30.0% (3) .057 0.11 NS**Conciseness** 7.1% (6) 10.0% (1) .745 0.24 <sup>NS</sup> **Originality** 6.0% (5) 10.0% (1) .621 0.49<sup>NS</sup> Variety .485 4.8% (4) 10.0% (1) Density 4.8% (4) 0.0% (-) Naturalness 1.2% (1) 0.0% (-) ----- $2.65 \ ^{\rm NS}$ .103 Layout: **Efficiency** 57.1% (48) 30.0% (3) 0.12 <sup>NS</sup> **Aesthetics** 25.0% (21) 20.0% (2) .728 4.03 \* Interaction 53.6% (45) 20.0% (2) .045  $0.00 \ ^{\rm NS}$ Information: Customised 60.7% (51) 60.0% (6) .965  $0.07 \ ^{\rm NS}$ Verified .797 26.2% (22) 30.0% (3)

**Table 5**: *Inferential analysis*. Categories of responses related to user experience, according to the Group (N=94). Phase 2.

Source: Own elaboration.

9.5% (8)

1.2% (1)

0.0% (-)

0.0% (-)

1.04 <sup>NS</sup>

.308

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**Includes humour** 

Biased

N.S. = NOT significant at 5% (p>.05) \* = Significant at 5% (p>.05). Numbers in **bold** indicate categories where the average is significantly higher.

By contrasting these variables according to gender, the vast majority of the percentages are very similar between men and women, except with regard to user experience in relation to the aesthetics of the bot design. The percentage in this aspect for men is 34.1%, which is 17% more than for women (significant at p<.10). Another factor that has been assessed is the mood of the bot in the conversations (14.6% *vs.* 3.8%) (significant at p<.10). According to age, those under 25 years of age obtain a higher percentage in all categories. They appreciate the originality and immediacy of the information (56.1% *vs.* 41.75); accuracy (35.4% *vs.* 16.7%), ease of use (34.1% *vs.* 8.3%; significant with p<.10), and clarity of style (19.5% *vs.* 0%).

In summary, we could say that after examining user experiences, and in view of our results, it appears that younger users have a positive perception of the news distributed by the bot, and this group comprises the majority of the sample under analysis. For this group, the quality of the information is adequate and comprehensible due to the summary and opinion that accompany each news item (44.7%). The use of graphics and audio-visual elements, including podcasts, is viewed positively as well. The informative style, accuracy, ease of use, and clarity of the news coverage in national, and above all in international politics (elections), has received a positive evaluation.

In view of the results, other informational issues such as the possibility of receiving verified and customised information (60.7%) through news notifications are some of the strengths of the bots, such as the one under analysis. Curiously enough, this feature was not especially appreciated by those under 25 years of age. However, there is greater agreement among users when assessing other aspects of distribution via the mobile phone, such as the novelty and immediacy of the information (75.5% and 54.3%, respectively).

With regard to interaction with the bot in the case under study, approximately 2 out of 3 users (35.9%) claim that Politibot's category menu and interface work well and establish a close connection with users by using humour, and even though it is somewhat limited, this is not a cause of frustration for respondents. This is due to the efficiency of the design (Hassan, 2015), which allows the user to obtain information through interaction (53.6%), and it also offers satisfaction and a positive assessment of the product (53.7%).

#### 4. Conclusions

In this period of liquid modernity (Bauman, 2002) in which audiences are looking for new online experiences, the future of journalism seems to rest on solid, responsible, differentiated, and segmented content through new formats that are mobile and omnipresent. For the user who has become a prosumer and a citizen interested in politics, such innovative formats provide them with the option of receiving reliable, engaging information and interacting with this data on a continual basis. To some extent, this is slow journalism (Rosique & Barranquero, 2017), because the bots generate and refine their own information that reaches the user as a conversation that is easy to understand and instantly guarantees answers to their questions.

The content, which is also in chatbots, continues to reign supreme, not only in terms of taking advantage of the interactive and multimedia potential of online communication, but also in terms of information quality (verified and customised), style (ease of use and clarity), its own friendly content with a touch of humour, as well as different types of questions for the user to respond to in order to stay informed. Even though traditional media are using Telegram for the distribution of news, their way of doing so does not seem to satisfy the expectations of a large percentage of users. The novelty and immediacy of the information are other strengths of the bot. However, it is also capable of spreading viruses and carrying out pernicious tasks (Santana, 2017), or even manipulating a user's information.

In light of the results, the success of chatbots such as Politibot, which put automation at the service of customisation, is a consequence of their ability to gather a good portion of these positive aspects according to the views of the people who use them. However, despite the immense popularity of Politibot, which was the first bot in Spain dedicated to political news with 8,400 subscribers in the first month of its launch in 2016, and was even given an award by Google in 2017, a large number of students and communication professionals do not seem to know about it. Furthermore, even though several respondents expressed interest in politics, nearly all of the participants in our study said they do not use it as a source of information. This leads us to propose further research related to the importance of incorporating these new trends into the university curricula and fostering activities that will connect training with entrepreneurship in the digital media ecosystem.

However, there is still a long road ahead before bots become a true interface with users that would allow the bot to make decisions regarding of its actions (Hanss, 2015). This also involves placing the focus on usability and functionality of the tool from the point of view of its operation and navigability. These are some of the shortcomings of the bot that need further development in order to be at the service of journalism.

In spite of this situation, the bot has been established as a tool that is highly useful for journalists and the media as a way of understanding the needs and demands of the audience. What does the future hold for informational chatbots? It would be advisable to investigate its evolution and future role in news dissemination as a substitute or complement to websites and conventional media, and where segmentation could be the key to success.

The study is part of the R&D&I project entitled, "La influencia de la audiencia en la innovación periodística y gestión de la participación: riesgos y oportunidades" ("The influence of the audience on journalistic innovation and participation management: risks and opportunities") (CSO2015-64955-C4-3-R-MINECO/FEDER). The translation of the article has been funded by the Universities of Seville and Malaga (Department of Journalism).

#### References

- Aguado, J. M. & Martínez, I. (2006). El proceso de mediatización de la telefonía móvil: de la interacción al consumo cultural. *Zer. Revistas de Estudios en Comunicación, 20*, 31943.
- Anderson, C. W. (2012). Towards a sociology of computational and algorithmic journalism. *New Media and Society*, *15*(7), 1005–1021. https://www.doi.org/10.1177/1461444812465137
- Anderson, C. W. (2013). What aggregators do: Towards a networked concept of journalisticexpertise in the digital age. *Journalism*, *1*4(8), 1008–1032. https://www.doi.org/10.1177/1464884913492460

Cairo, A. (2011). *El arte funcional: infografía y visualización de la información*. Madrid: Alamut Ediciones.

Campos, E. & García, B. (2018). Comunicación algorítmica en los partidos políticos: automatización de producción y circulación de mensajes. *El profesional de la información*, *27*(4), 769-777. https://www.doi.org/10.3145/epi.2018.jul.06

Coller, X. (2000). Estudio de casos. (Cuadernos metodológicos, 30). Madrid: CIS.

- Bauman, Z. (2002). Modernidad líquida. México D.F.: Fondo de Cultura Económica.
- Bunz, M. (2010). In the US, algorithms are already reporting the news. *The Guardian,* 30<sup>th</sup> March 2010. Retrieved from

https://www.theguardian.com/media/pda/2010/mar/30/digital-media-algorithms-reporting-journalism

- Carlson, M. (2015). The robotic reporter: Automated journalism and the redefinition of labor, compositional forms, and journalistic authority. *Digital journalism*, *3*(3), 416-431. https://www.doi.org/10.1080/21670811.2014.976412
- Coddington, M. *et al.* (2014). Fact Checking the Campaign. How Political Reporters Use Twitter to Set the Record Straight (or Not). *The International Journal of Press/Politics, 19*(4), 391–409. https://www.doi.org/10.1177/1940161214540942
- Fernández, R. (2004). *Evaluación psicológica. Conceptos, métodos y estudio de casos*. Madrid: Pirámide.
- Frasca, G. (2013). *Newsgames*: el crecimiento de los videojuegos periodísticos. In C. Scolari (Ed.), *Homo videoludens 2.0. De Pacman a la gamification.* (pp. 254-263). Barcelona: Col·lecció Transmedia XXI. Laboratori de Mitjans Interactius. Universitat de Barcelona.
- Gaudenzi, S. (2009). *Digital interactive documentary: from representing reality to co-creating reality*. London: University of London. Centre for Cultural Studies (CCS) of Goldsmiths.
- Gutiérrez-Rubí, A. (2016). *Bots* para la comunicación política. *Gutierrez-rubi.es*, 2<sup>nd</sup> November 2016. Retrieved from https://www.gutierrez-rubi.es/2016/11/02/bots-en-comunicacion-politica/
- Hassan, Y. (2015). *Experiencia de usuario: principios y métodos.* Retrieved from http://yusef.es/Experiencia\_de\_Usuario.pdf
- Interactive Advertising Bureau Spain (2017). *Estudio Anual de Redes Sociales*. Retrieved from http://iabspain.es/wpcontent/uploads/iab\_estudioredessociales\_2017\_vreducida.pdf
- Johri, A. Han, E. (Sam) & Mehta, D. (2016). Domain Specific Newsbots. Live Automated Reporting Systems involving Natural Language Communication. *Computation* + *Journalism Symposium 2016*. University of Standford, California. Retrieved from https://journalism.stanford.edu/cj2016/files/Newsbots.pdf

- Ling, R. & Haddon, L. (2003). Mobile telephony and the coordination of mobility in everyday life. In J. Katz (Ed.), *Machines That Become Us. The Social Context of Personal Communication Technology* (pp. 245-266). New York: Routledge.
- Oksman, V. & Rautiainen, P. (2002). Toda la vida en la palma de mi mano. La comunicación móvil en la vida diaria de niños adolescentes de Finlandia. *Revista de Estudios de la Juventud, 57*, 25-32.
- Manchón, E. (2016). Por qué los *chatbots* matarán tu web, tu app y quizás también a Google. *Eduardomanchon.com*, 6<sup>th</sup> April 2016. Retrieved from https://eduardomanchon.com/porqu%C3%A9-los-chatbots-matar%C3%A1n-tu-web-tu-app-y-quiz%C3%A1stambi%C3%A9n-a-google-6c612aac4bfc#.24hy6d2bv
- Manovich, L. (2013). Software takes command. London: Bloomsbury Publishing.
- Martín, V. (2009). Identidades juveniles móviles: la sociedad de la comunicación personal. *Educación, Lenguaje y Sociedad, 6,* 53-68.
- Martini, S. (2000). Periodismo, noticia y noticiabilidad. Bogotá: Norma.
- Martínez, J. L. (1993). Curso general de redacción periodística. Lenguaje, estilos y géneros periodísticos en prensa, radio, televisión y cine. Madrid: Paraninfo.
- Nielsen, J. (2012). Usability 101: introduction to usability. *Nielsen Norman Group*, 4<sup>th</sup> January. Retrieved from https://www.nngroup.com/articles/usability-101-introduction-tousability/
- Neuendorf, K. A. (2002). The content analysis guidebook. Thousand Oaks, CA: Sage.
- Nyhan, B. & Reifler, J. (2016). Estimating Fact-checking's Efects. Evidence from a long-term experiment during campaign 2014. *American Press Justitute*, August. Retrieved from https://www.americanpressinstitute.org/wp-content/uploads/2016/09/Estimating-Fact-Checkings-Effect.pdf
- Lemelshtrich, N. (2015). The New World of Transitioned Media. In G. Einav (Ed.), *The Economics of Information, Communication, and Entertainment. Digital Realignment and Industry Transformation* (pp. 65-80). USA: Sprinter. Retrieved from
  - https://link.springer.com/chapter/10.1007/978-3-319-09009-2\_6#page-1
- Lewis, S. C. & Nikki, U. (2013). Open source and Journalism: Toward New Frameworks for Imagining News Innovation. *Media, Culture and Society*, *35*(5), 602–619. https://www.doi.org/10.1177/0163443713485494
- Lokot, T. & Diakopoulos, N. (2016). News Bots. Automating news and information dissemination on Twitter. *Journal Digital Journalism*, *4*(6), 682–699. https://www.doi.org/10.1080/21670811.2015.1081822
- Pachico, E. (2016). Lo que necesitas saber para crear un *bot* de noticias. *IJnet*, 2<sup>nd</sup> November 2016. Retrieved from https://ijnet.org/es/blog/lo-que-necesitas-saber-para-crear-un-bot-de-noticias
- Pérez, A. (2017). El Vocento Media Lab lanza InfoEsquí, un experimento de "periodismo-robot" para la temporada de nieve. *Periodista Digital*, 23<sup>rd</sup> February 2017. Retrieved from http://www.periodistadigital.com/periodismo/internet/2017/02/23/el-vocento-media-lab-lanza-infoesqui-un-experimento-de-periodismo-robot-para-la-temporada-de-nieve.shtml
- Persily, N. (2016). Can democracy survive the internet? *Journal of democracy*, *28*(2), 63–76. Retrieved from

 $https://www-cdn.law.stanford.edu/wp-content/uploads/2017/04/07_28.2\_Persily-web.pdf$ 

- Politibot (2017). Politibot: términos de uso. Retrieved from http://telegra.ph/Politibottérminos-de-uso-03-05
- Rosique, G. & Barranquero, A. (2015). Periodismo lento (*slow journalism*) en la era de la inmediatez. Experiencias en Iberoamérica. *El profesional de la información*, *24*(4), 451-462. https://www.doi.org/10.3145/epi.2015.jul.12

- Sábada, Ch. & Salaverría, R. (2016). Los 'labs' de medios en España: modelos y tendencias. In A. Casero Ripollés (Coord.), *Periodismo y democracia en el entorno digital* (pp. 149-164). Salamanca: Sociedad Española de Periodística (SEP).
- Sainz, M./Vocento Media Lab (2016). Los *bots* han llegado... ¿para quedarse? *Medium.com*, 16<sup>th</sup> July 2016. Retrieved from https://medium.com/@VocentoLab/los-bots-han-llegado-para-quedarse-214448cbc442
- Sánchez, M., Palomo, B. & Sánchez, H. M. (Coords.) (2017). La influencia de la innovación en la verificación periodística. Mesa de debate propuesta para el Congreso Latina de Comunicación Social. Universidad La Laguna, Tenerife, 7<sup>th</sup> December 2017. Retrieved from http://www.revistalatinacs.org/17SLCS/2017\_convocatoria\_9\_congreso.html#926
- Sánchez, H. M. & Sánchez, M. (2017). Los *bots* como servicio de noticias y de conectividad emocional con las audiencias. El caso de Politibot. *Doxa*, *25*, 63-84. Retrieved from http://doxacomunicacion.es/es/hemeroteca/articulos?id=218
- Sánchez, H. M. & Martos, F. J. (2018). Telegram, nueva estrategia de comunicación e información periodística. In A. De Vicente Domínguez & Á. García Gómez (Eds.), *Postperiodismo. Entre lo real y lo virtual* (pp. 88–89). Málaga: Sociedad Española de Periodística (SEP).
- Sánchez, H. M. (2012). Los dispositivos móviles y la conectividad emocional con el usuario *TechPuntoCero.* Retrieved from http://www.techpuntocero.com/los-dispositivos-moviles-y-la-conectividad-emocional-con-el-usuario/
- Sánchez, M. (2013). Movilidad y participación. In M.ª Á. Cabrera González (Coord.), *Evolución de los cibermedios. De la convergencia digital a la distribución multiplataforma* (pp. 129-143). Madrid: Fragua.
- Sánchez, M. (2011). Los *smartphones* como herramienta para el periodismo móvil: potencial y tendencias de uso por profesionales de la información, usuarios y empresas periodísticas. Contribution *to* III Congreso Latina de Comunicación Social. Universidad La Laguna, December 2011. In *Actas, en CD-rom, del III Congreso*. Retrieved from http://www.revistalatinacs.org/11SLCS/actas\_2011\_IIICILCS/076.pdf
- Santana, J. (2017). ¿Qué son los *bots*? Tipos y usos en *Enredia*. Retrieved from https://www.enredia.es/que-son-los-bots-tipos-usos/
- Scolari, C. A. (2013). Narrativas transmedia: cuando todos los medios cuentan. Barcelona: Deusto.
- Soberman, J. (2013). User testing: how news designers and developers add context to quantitative data. *Knight Lab*, August 27. Retrieved from https://knightlab.northwestern.edu/2013/08/27/user-testing-how-news-designers-
- and-developers-add-context-to-quantitative-data/index.html Suárez, E. (2016). Interview conducted in Sinercom (Networking entre proyectos universitarios y empresas) organized by the Laboratorio de Proyectos en Comunicación
- universitarios y empresas) organized by the Laboratorio de Proyectos en Comunicacion (LabProCom). Universidad de Sevilla. Thurman, N., Dörr, K. & Kunert, J. (2017). When Reporters Get Hands-on with Robo-Writing.
- Professionals consider automated journalism's capabilities and consequences. *Journal Digital Journalism*, *5*. Special Issue: Journalism, Citizenship and Surveillance Society, 1–20. https://www.doi.org/10.1080/21670811.2017.1289819
- Yin, R. K. (1998). Case study research. Design and methods. Newbury Park, CA: Sage.
- Woolley, S. C. & Howard, P. N. (2017). Computational Propaganda Worldwide: Executive Summary. Working Paper, 11, 2017. Oxford: OII, University of Oxford. Retrieved from http://blogs.oii.ox.ac.uk/politicalbots/wp-

content/uploads/sites/89/2017/06/Casestudies-ExecutiveSummary.pdf