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Reactions of a connected society: comments in Fanpages of Brazilian Executive and Legislative Entities

Reações da sociedade conectada: comentários em Fanpages do Executivo e Legislativo Federais

Reacciones de la sociedad conectada: comentarios em páginas de Facebook del Ejecutivo e Legislativo Federales de Brasil
ABSTRACT
It aims to identify and analyse reactions and issues commented on posts on Facebook pages of entities of Brazilian federal Executive and Legislative Branches. We accomplish a text and sentiment analysis. The results show that Executive entities have more positive comments than Legislative. In addition, it indicates that Facebook pages are spaces where debates on public issues happen, however, there are lacks, which prevent an effective digital governance in social media.
Keywords: Public communication. Reactions. Facebook pages of government.

RESUMO
Identifica-se e analisa-se reações e assuntos comentados em postagens nas páginas do Facebook de órgãos do Executivo e Legislativo federais. Utiliza-se de análise sintática textual e de sentimentos, por meio dos softwares Netvizz, Iramuteq e Semantria, e com checagem manual. Os resultados apontam que os órgãos do Executivo têm mais comentários positivos que os representantes do Legislativo. Indica-se que as páginas do Facebook são espaços onde se dá o debate acerca das questões públicas, mas ainda faltam ações para efetiva governança digital nestas mídias.

RESUMEN
Se identifican y analizan reacciones y asuntos comentados en las páginas del Facebook de órganos del Ejecutivo y Legislativo federales. Se utiliza de análisis sintáctico textual y de sentimientos, por medio de los softwares Netvizz, Iramuteq y Semantria, y con chequeo manual. Los resultados apuntan que los órganos del Ejecutivo tienen más comentarios positivos que los representantes del Legislativo. Se indica que las páginas de Facebook son espacios donde se da el debate sobre las cuestiones públicas, pero aún faltan acciones para efectiva gobernanza digital en estos medios.
Palabras clave: Comunicación pública. Reacciones. Páginas gubernamentales de Facebook.

Submissão: 29-7-2017
Decisão editorial: 2-5-2018
1 introduction

The consolidation of a digital culture involves a redesign of social practices, public and private spaces. Social media establishes another logic of production and consumption, from where part of the existence of subjects flows. (SANTAELLA, 2016). Political and artistic activism, the relation with the physical space, with others and even with the body itself, change. These changes also affect citizenship: in a new context, new forms of interaction and types of social relationship are manifested. (THOMPSON, 1998).

The participatory culture that emerges with Web 2.0 is related to a reconfiguration of the concept of crowd, since nowadays it exerts its political and artistic activism in the networks. This is because “today we inhabit interstitial spaces with instantaneous passages from virtual to current space, and vice versa” (SANTAELLA, 2016, p.71, our translation). What is perceived is that the Network Society is an adequate description of the current situation (CASTELLS, 2006). In this environment, “interactive media and deterritorialized virtual communities open a new public sphere that flourishes in freedom of expression.” (LÉVY, 2005, p. 367, our translation).
The definition of digital governance\(^1\) mechanisms that consider the characteristics of this new context would serve the users of intelligence technologies. Facing the challenge of strengthening civil participation in political actions (GOMES, 2005a) and considering transformations in political exercise engendered by information and communication technologies (CASTELLS, 2006), it is important to observe reactions of citizens to the content published by government agencies in social media.

In this sense, we try to understand how Facebook users in Brazil react to posts made on pages of federal Executive and Legislative Branches. Thus, the overall goal of this article is to identify and analyze reactions of the public to posts of government pages on Facebook. Such a proposal can contribute to studies on the characteristics of citizen participation in the Facebook pages and on users’ perceptions about the governmental use of those fanpages. Nevertheless, the study aims to contribute to research on public communication mediated by social networking sites, considering the interactional potential of these media and the search for transparent government entities. The choice of only Executive and Legislative Power pages is justified because they are, respectively, an executive and representative body of Brazil’s democracy, both elected by direct vote. In addition, Gomes

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\(^1\) Considering that we are inserted in a digital culture – in which a post-digital culture is already at discussion, as explain Santaella (2016) – and regarding digitalization surpass of electronic logic (SANTAELLA, 2013), we use the term “digital government” instead of “electronic government” or other terms. However, when the text refers to concepts proposed by other authors, we kept the original term.
et al. (2017) have already conducted similar evaluation in fanpages of federal judiciary.

In order to meet this objective, a conceptual review on connected society and public communication is carried out, based on authors such as Castells (2006), Gomes (2004, 2005a, 2005b), Duarte (s/d), Santaella (2003, 2016) Levy (2005), Lemos (2002), among others. The empirical research involved three phases: data collection, which made use of the Netvizz application to extract posts and comments, treatment and syntactic and sentiment analysis, with the softwares Iramuteq and Semantria.

2 The connected society

The rhizomatic model of the Internet determines interaction between users and gives them the possibility to produce new content while watching others (LEMOS, 2002). In turn, the post-mass character of the network would allow a more horizontal communication (LEMOS, 2007). This Internet architecture enables greater circulation of information, opinions and points of view. The expanding capacity of cyberspace would give voice to more agents, which could result in a cacophony. However, according to Martino (2014), this problem does not manifest itself at all levels of connection, which makes possible to debate at specific levels. In this sense, it is questioned: does the internet expand and “revive” the public sphere?

Habermas (2003) discusses the emergence of a bourgeois public sphere in Modernity, linked to the development of the press and to the mercantile capitalism associated with modernity. The press itself arises when the transmission of information becomes “accessible to the general public” (HABERMAS, 2003, p. 30, our
The public sphere would then be an intermediary space between the private sphere and the State, a space in which the bourgeois class expresses its opinion on matters of public interest. The press, by exposing themes related to the state sphere, facilitates the control of political power, which may be theme of conversations by subjects through rationalization.

Thompson (1998) points out that Habermas' proposal neglects the existence of other social movements, highlights the restricted character of the public sphere and does not explain its dissolution. In turn, Gomes (2004) points out that the alternation of power in a democratic state divides the press between government and opposition, which limits its functioning as an instrument of the public sphere. The author highlights a process of professionalization of political communication, involving a control of appearances and the production of a spectacle.

Martino (2014) emphasizes that the dissemination on the internet of some subject does not mean that it is inserted in a virtual public sphere. A small part of the information on the network could be inserted between topics of debate in tune with the Habermasian proposal. On the other hand, the emergence of mailing lists, blogs, social media and others could widen the discussion spaces, forming agile "public spheres". However, we must considerate cacophony, the difference between network nodes, algorithms, and commercialization that redraws public and private spaces.

Faced with a culture influenced by television, Thompson (1998) discusses the political aspect of managing visibility through the media. The art of governing involves deciding what should or should not be public. The eminence of the media in a globalized
society, however, would lead to a condition of global scrutiny, including political action. In digital culture, where visibility is a sign of status, politics is also transformed (KEEN, 2012).

Since its emergence, the internet has shaped new cultures and social relationships. The exercise of activism and political action permeates the new virtual spaces and flows from them to the world today. (KEEN, 2012; MARTINO, 2014; SANTAELLA, 2003, 2016). In this sense, many theorists defended the internet for its possibility of broadening political participation. Existing access and cultural capital for its use, the internet is valuable for political participation. However, the use of a medium alone does not guarantee a culture of political participation (GOMES, 2005a). After all,

While on the one hand the Internet allows voters to provide politicians with direct feedback on issues that they present, regardless of the industrial media, on the other hand it does not guarantee that this feedback will eventually influence political decision making. (GOMES, 2005a, p. 221, our translation).

For Gomes (2005a; 2005b), one should focus not on the “promises” of the internet, which, as a simple medium, would not be able to promise or make any social change. It is more useful and necessary to think about strategies to attract political participation within (and outside) the networks. It also points out the relevance of discussing the supposed post-mass character of social media. The algorithm governance of life

2 The algorithm governance of life, organized by artificial intelligences, displaces the authorship of human decisions: more than ever, such decisions are made by the logical reason of digital tools. Users does not know which metrics and algorithms organizes the order of posts in Facebook newsfeed. They also
begins to be subject of discussions in the world and reflects a more efficient form of surveillance: control. (SANTAELLA, 2016). The contents available in the network are hierarchized by their supposed relevance, which, in theory, is more of a hindrance so that the voice of the social actors is actually heard.

A true digital democracy, according to Gomes (2005b), involves the delimitation of new governmental practices. Gomes (2005b) explains that its implementation involves five grades. The first one is characterized by provision of information and public services through the internet. The second grade involves public consultation of themes for public agenda formation. In those grades, the flow of information goes from the state to the citizen. In grade 3 there is transparency in the State actions and an efficient rendering of accounts and information to the citizens, attending to their demands.

The fourth degree, says Gomes (2005b), involves some forms of deliberative democracy, in a hybrid form between representative and participatory models. The citizen has a certain degree of participation in the political decision. Finally, the fifth degree involves the emergence of a model of direct democracy, with the extinction of the political sphere and its replacement by the public. Amaral (2010) also emphasizes the importance of establishing channels for effective
citizen participation. Lemos and Lévy (2010), in turn, point to the principles of e-government:

- Build services around citizens’ choices (not around the closures and privileges of management);
- Make government and its services more accessible (notably through the internet);
- Include populations disadvantaged by traditional forms of government (services for linguistic minorities, the disabled, expatriates, foreigners);
- Better use of information (in particular with the connection of information systems now separated). (Lemos, Levy, 2010, p. 139, our translation).

The textual genre limits the possibilities of exhausting this subject. We emphasize that the internet, as well as any means of communication, redraws the possibilities of human action and social organization. However, it can not be said that internet alone can strengthen citizen participation in democracy. Even though, this does not prevent Brazilian State from complying with its legislation and offering multi-participatory and transparent governance mechanisms on the Internet.

2.1 Communication in the Brazilian public administration

The relationship between the Brazilian State and communicative practices is not restricted to its concessionary or regulatory role, guaranteed by law. Censorship was already present in Brazil Cologne and manifested itself in various forms after Independence. In Republic, censorship manifested itself in the Old Republic and was institutionalized in state agencies in Estado Novo’ dictatorship. Some years later, the civil-military dictatorship, which its Law of the Press and
Institutional Acts, suppressed the free press (SODRÉ, 1999). With redemocratization, a new paradigm of public communication emerges. Duarte (s/d) points out that the term “public communication”, itself, highlights a change in state communication, an earlier model characterized by an authoritarian and censoring perspective. Public communication has a citizen bias, focusing on citizen participation, discusses issues of collective interest and opens space for dialogue. For Manieri and Ribeiro (2011), it seeks to broaden the exercise of citizenship.

The provision of information and a space of communication between the State and its citizens, seeking to provide them with inputs for citizenship, is the governmental dimension of public communication. It seeks to involve the citizen in the construction of a public agenda, of projects and policies. It has a distinct objective of political communication, which promotes the expression of ideas and political positions of governments and parties. (BRANDÃO, 2006).

In a country with a narrow democratic history, such as Brazil, the boundaries between government communication and politics are not well delimited and such discourses blend.

The 1988 Constitution introduces, in its article 37, the principle of publicity of acts of Public Administration, highlighting communication as essential for good public administration. Law 12,527, published in 2011, also known as the Law on Access to Information (LAI), determines the provision of information by institutions that are maintained with public money. In this sense, it also involves organizations from the third sector such as non-governmental organizations (NGOs). LAI is an important mechanism for transforming the old culture
of obliterating information, as well as stimulating the availability of these without the citizen always having to search for them alone (DUARTE; THEORGA, 2013). Also worthy of mention is the Civil Internet Framework (Law 12.965 / 2014), which establishes the obligation of the public power to create multiparty governance mechanisms on the internet (BRAZIL, 2014).

There are specific characteristics of Internet use in Brazil that should be taken into account when establishing digital governance strategies. Mobile devices use to access Internet are increasing, surpassing the use of computers. (BRASIL, 2015, PESQUISA ..., 2016a). Among the respondents of Brazilian’s research TIC Domicílios 2015, 59% accessed information on government websites that year. The access rate, however, is related to social class: while 86% of users with a family income exceeding ten minimum wages use these services, among those with income up to a minimum wage, only 34% do. (PESQUISA ..., 2016a). There is still the problem of the digital divide: the number of Brazilians who do not have internet access is between 42% (TIC Domicílios) and 51% (Pesquisa Brasileira de Mídia - Brazilian Media Research). This portion belongs to the lower and less educated classes.

Government agencies, for their part, are not prepared for mobile access. Only half of federal agencies have websites that fit mobile devices, and only 33% offer apps. 80% participate in Facebook, with 52% of pages updated daily, while 28%, at least once a week. The page is used to disseminate news of the agency, services and campaigns. Responding to the comments and doubts of citizens, however, is the least accomplished task: only 76% of the government agencies stated they do so. (PESQUISA ..., 2016b).
3 Methodological procedures

Considering the specific characteristics of social media and with the objective of answering the problem question, this research was developed in three phases: 1) data collection; 2) treatment for analysis; and 3) syntactic analysis and similitude analysis with the software Iramuteq, and analysis of sentiment of a simple stratified sample using Semantria³.

At first, we took up the Facebook pages linked to the Federal Executive and Legislative. We also evaluated the amount of likes, its ID, general information and use policy, among other data. The pages were selected by the hierarchical level of the agency that maintains them and their amount of likes. This step was restricted to pages linked to the top executive branch and federal legislative houses. In Executive Branch, the Ministry of Education has the page with the highest number of likes⁴ (2,911,493), followed by the Ministry of Health (1,862,161). Federal Senate, with 2,471,502 likes, and Chamber of Deputies, with 218,667, are the selected pages in the Legislative Power.

We extracted Facebook data with Netvizz application (version 1.41). With this feature, we downloaded the last 50 posts of each body and its 200 comments with more likes and involved. The downloaded data includes the following corpus: 200 posts and 17,344

³ Sentiment and similiarity analysis are a new field of studies associated to content analysis, a traditional method. Initially developed manually, now they have been implemented by softwares, which automatizes this process, considering the expressive increasing of publics and its diversity in digital culture. Such increase results in new behavioral habits, which the traditional methods of social science can not cover.

⁴ All mentions of number of fanpages likes in this paragraph considers numbers collected in January 12, 2017, at 4 P.M.
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comments published on the pages between December 15, 2016 and January 12, 2017.

The second step involved data processing. Using a spreadsheet editor, we ranked posts of each page by their number of likes. After this, we selected the top 10 most liked and commented publication of each page. With this procedure, we defined the final: 40 posts and 5612 comments. Tables describing the analyzed posts are presented in this article, closer to the result of such analysis. In other step, we copied the comments to Windows Notepad, separating them by post and identifying them using the following logic:

**** *Page-name_Nº -*Post-theme

This procedure was necessary so that the textural analysis software, Iramuteq, understands that it is a segment of text to be analyzed. After that, we saved the data in .txt, using UFT-8 codification and inserted such data into the software. In parallel, we defined a sub-corpus to sentiment analysis by stratified proportional sampling. This was necessary since a free license of Semantria, the program used in this process, limits the number of operations available. The amount of comments selected is available in Scheme 01. The spreadsheet editor generated a random number for each comment on the pages. We sorted these numbers in descending order and seletted the number of comments required in each stratum. Such sampling has a margin of error of 5% and a confidence level of 99%.

The last phase was the execution of the analysis. The entirely corpus was evaluated by Iramuteq, which determines the occurrence of grammatical expressions and classes. We chose to analyze the occurrence of
adjectives, nouns and onomatopoeias. From these data, we produced a word cloud with recurring expressions and similarity analysis, to point out the relationships between these in the text.

The sub-corpus, organized in spreadsheet, was evaluated in Semantria for Excel. The software performs text mining in search for expressed categories and feelings. However, it still does not present an evaluation of intentions and figures of language in Portuguese. An analysis using a controlled vocabulary has results that are more reliable. As the research reported here did not involve the production of a controlled vocabulary, a manual checking for each result and its categorization was performed.

The steps of this research were defined in order to solve software deficiencies. Netvizz, for example, downloads Facebook data in encoding different from that used in spreadsheet editors. Therefore, you need to change the encoding when importing files. The application also saves empty data: comments that contain date and time but have no text. Generally, they are comments in that there were only emojis, not always extracted. So, it is necessary to make treatment of the tables.

In turn, Iramuteq makes a literal analysis of the texts. As its analysis does not process natural language, it does not recognize some of the internet’s characteristic expressions in Brazilian Portuguese: “vc”, “kkk”, “ata”, “rs”, and so on. The software still requires specific coding and word processing and has no user-friendly interface. The Iramuteq user should also delimit the grammar classes that will be considered in the analysis. However, it is necessary to choose such classes from the grammatical classes existing in the French language.
**Scheme 01 – Research methodology**

**RESEARCH METHODOLOGY**

1. **FIRST EVALUATION OF GOVERNMENTAL FANPAGES**
   - Institutional relationships;
   - Fanpage ID;
   - Number of likes;
   - Fanpage’s general information and users policies.

2. **SELECTION OF FANPAGES TO BE ANALYSED**
   - Hierarchical level;
   - Number of likes.

3. **FANPAGES’ DATA EXTRACTION**
   - Use of Netvizz;
   - Selection of the last 50 posts and 200 top ranked comments of each fanpage.
   - Amount of collected data: 200 posts and 17,344 comments.

**DATA COLLECTION**

**DATA SELECTION AND TEXT TREATMENT**

- Selection of the top 10 most liked posts of each page. Thus, our corpus has had 40 posts and 5612 comments, published between December 15, 2016 and January 12, 2017.

- Comments were copied in Windows Notepad, sorted by post and identified according the following structure. After such step, the file was saved as .txt (UTF-8 codification).

   **** *Fanpage_Name* _N_ • *post_theme*

- Selection of sample of comments to sentiment analysis, by proportionate stratified sample. Such comments were arranged in a sheet.

Federal Senate: 187  
Ministry of Education: 128  
Chamber of Deputies: 110  
Ministry of Health: 105

**TREATMENT**

**TEXTUAL ANALYSIS WITH IRAMUTEQ**

- Definition of word classes which would be considered;
- Word cloud;
- Analysis of similarities.

**ANALYSIS**

**SENTIMENT ANALYSIS WITH SEMANTRIA**

- Indication of analysed entities;
- Sentiment analysis;
- Manual checking to avoid wrong results due to the lack of a controlled vocabulary.

**Source:** elaborated by authors, 2018.
Semantria is easier to use, though it does require knowledge of Excel functions, such as PivotTables. However, it requires a “tuning”, made from the construction of a controlled vocabulary, in which each expression to be observed is evaluated from -1 to 1, being 0 a neutral evaluation. To ensure better results, the controlled vocabulary should also involve the list of analyzed institutions. The lack of such thesaurus requires manual data checking.

4 Results

The presence of these organs in social media is limited to the second level of digital democracy. The posts present information about the actions of the Executive and Legislative, opening consultations in some moments. All this, however, is limited by the interface and the proposal of each page. When this information pleases the public, they make mentions to friends and share such posts. The results indicate the relevance of this dynamic. On certain occasions, the page managers are asked about the validity of some policy or to remedy a doubt. The answers to the citizen, however, do not always come, which corroborates the data of Brazilian research TIC Governo Eletrônico 2015.

The sentiment analysis indicates that the comments posted on the pages of the Executive are more positive than those of the Legislative. Among the organs, the Ministry of Health had a larger number of positive reactions to posts, while the Chamber of Deputies is the one with the most worn out image. The data highlight a disagreement with the political class and a crisis of representation. Users relate the political class to corruption and criminal acts. The page of the Ministry of Education, in turn, is the one that has
the most negative comments about the government of Michel Temer and the process of impeachment of Brazilian ex-president Dilma Roussef.

The management of the pages is not free from criticism. Users lament the exclusion of comments and certain types of posting. A “consultation” by the Chamber of Deputies, which asked users to demonstrate their approval or rejection of the baggage allowance on air travel, received confrontation. In turn, the Ministry of Health was criticized for referring to those who have Chron’s disease as a carrier of such disease, which suggests the possibility of dissociating itself from the disease when you want.

4.1 Ministry of Education
Table 01 presents analyzed posts of the page of the Ministry of Education:

“Temer”, coup “,” coup leader”, “absurd “ and “#staySpanish” are expressions that appear in the same context, in comments that react to a reform of High School educational curriculum. In the comments posted on the page, users also relate “Senate” and “joke”. In a post made by the Ministry of Education (MEC) on Reading Day, the agency invited users to share their taste for reading. In the comments, “book”, “new”, “smelling” and “satisfactory” were words related. The presence of “sitcom” between the most frequent words is due to the speech of some students who said to be involved in TV series, in seeing to finalize their undergraduate thesis. In this sense, it is safe to assume that young users composes an important share of the audience of such fanpage, which influence their reactions.
Table 01 – Ministry of Education’s fanpage selected posts

SELECTED POSTS

EXECUTIVE BRANCH
MINISTÉRIO DA EDUCAÇÃO
(MINISTRY OF EDUCATION)

<table>
<thead>
<tr>
<th>Post text</th>
<th>Link</th>
<th>Likes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Obá! Janeiro chegou e o resultado oficial do #Enem2016 chegará em breve!</td>
<td><a href="https://www.facebook.com/188209457893503/posts/1220527417995030">https://www.facebook.com/188209457893503/posts/1220527417995030</a></td>
<td>12511</td>
</tr>
<tr>
<td>Fiquem ligados em nossas redes sociais! Dia 19/01 eles estarão disponíveis.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pessoal, atenção ao emprego dos porquês! Como a pronúncia é a mesma fica</td>
<td><a href="https://www.facebook.com/188209457893503/posts/1220534962113">https://www.facebook.com/188209457893503/posts/1220534962113</a></td>
<td>7580</td>
</tr>
<tr>
<td>fácil confundir?! Veja as situações em que usamos cada um: [imagem]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A gente sofre perde noites de sono quebra a cabeça... Mas quando o TCC está</td>
<td>h t t p s : / / w w w . f a c e b o o k . c o m / 1 8 8 2 0 9 4 5 7 8 9 3 5 0 3 / p o s t s / 1 2 2 6 5 1 6 5 8 0 2 7 2 9 3</td>
<td>6 1 0 1</td>
</tr>
<tr>
<td>pronto a gente ama e sente muito orgulho não é verdade?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Os amantes de livros novos se identificam hein? Quem também aprecia o</td>
<td><a href="https://www.facebook.com/188209457893503/posts/1222881447795907">https://www.facebook.com/188209457893503/posts/1222881447795907</a></td>
<td>5 6 2 1</td>
</tr>
<tr>
<td>livro desde o cheirinho até a última palavra? Apareça aí! Conte para gente</td>
<td></td>
<td></td>
</tr>
<tr>
<td>quai foi o último que você leu? Ah! Marque o amigo que também é “desses”</td>
<td></td>
<td></td>
</tr>
<tr>
<td>é mesmo? Estamos toendo para que você realize todas!</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A afirmação “o cachorro é o melhor amigo do homem” nunca foi tão verdade-</td>
<td></td>
<td>2 5 2 7</td>
</tr>
<tr>
<td>a... O estudo da biológica Natalia da Souza Albuquerque do Instituto de</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Psicologia da Universidade de São Paulo (USP) comprovou que esses animais</td>
<td></td>
<td></td>
</tr>
<tr>
<td>conseguem reconhecer e diferenciar expressões emocionais de raiva e ale-</td>
<td></td>
<td></td>
</tr>
<tr>
<td>grita não somente em outros cães, mas também em seres humanos. O artigo</td>
<td></td>
<td></td>
</tr>
<tr>
<td>“Dogs recognize dog and human emotions” foi publicado na edição de janeiro</td>
<td></td>
<td></td>
</tr>
<tr>
<td>do Biology Letters – periódico disponibilizado aos usuários do Portal de</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A estudante brasileira Larissa Oliveira apresentou o trabalho de pesquisa</td>
<td><a href="https://www.facebook.com/188209457893503/posts/1220488727998039">https://www.facebook.com/188209457893503/posts/1220488727998039</a></td>
<td>2 2 8 3</td>
</tr>
<tr>
<td>no Congresso Internacional de Física Médica [International Conference on Medical Physics] em Bangcoc, Tailândia. Ela foi a única representante brasileira no evento...</td>
<td></td>
<td></td>
</tr>
<tr>
<td>“Tive o privilégio de conhecer importantes e influentes físicos e médicos de diferentes países trocar experiências com estudantes da Tailândia e aprimorar conhecimentos sobre os avanços tecnológicos na área; Saiba mais sobre a experiência de Larissa: <a href="https://goo.gl/kQpqjBk">https://goo.gl/kQpqjBk</a> Ouaçã aqui: <a href="https://goo.gl/mg69D3">https://goo.gl/mg69D3</a></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A medida pretende melhorar o processo de conclusão do aditamento pelos estudantes. Saiba mais: <a href="https://goo.gl/kFQyVQ">https://goo.gl/kFQyVQ</a> Oçaquã aqui: <a href="https://goo.gl/i0dWZ1">https://goo.gl/i0dWZ1</a></td>
<td><a href="https://www.facebook.com/188209457893503/posts/1229880701393075">https://www.facebook.com/188209457893503/posts/1229880701393075</a></td>
<td>2 1 1 1</td>
</tr>
<tr>
<td>Ficamos orgulhosos de quem acredita no poder da educação! Ela realmente transforma vidas e um país inteiro. Conte para a gente a sua experiência!</td>
<td></td>
<td>2 0 5 0</td>
</tr>
<tr>
<td>O reajuste segue os termos do art. 5º da Lei nº 11,738 de 16 julho de 2008</td>
<td><a href="https://www.facebook.com/188209457893503/posts/122753443961335">https://www.facebook.com/188209457893503/posts/122753443961335</a></td>
<td>1 8 7 0</td>
</tr>
<tr>
<td>que estabelece a atualização anual do piso nacional do magistério sempre a partir de janeiro. “Para este ano o piso nacional do magistério é de R$ 2.299,80. O professor que tem carga horária mínima de 40 horas semanais e formação em nível médio (modalidade curso normal) não pode receber menos do que esse valor. afirma o ministro Mendonça Filho. Saiba mais: <a href="https://goo.gl/d886hy">https://goo.gl/d886hy</a></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: elaborated by authors, 2018.
Sentiment analysis highlights the frequency of mentions (53%, or 62 comments) to other users. They usually involve reports of the life story of the commentators. Users criticized Temer’s Presidency and MEC (10, or 8%), to the new minimum wage of teaching profession (8, or 6%) and to educational reform (3, or 2.4%). Two comments endorse the posts of the Ministry. In posts about Reading Day and other amenities, comments tend to be neutral.

Image 01 – Most frequent words in comments at Ministry of Education’s fanpage

Source: elaborated by authors, 2018.
4.2 Ministry of Health

Analyzes posts of the fanpage of Ministry of Health are presented in Table 02:

**Table 02 – Ministry of Health’s fanpage selected posts**

<table>
<thead>
<tr>
<th>Post text</th>
<th>Link</th>
<th>Likes</th>
</tr>
</thead>
<tbody>
<tr>
<td>A Doença de Crohn é uma doença inflamatória que pode atentar qualquer parte do tubo digestivo desde a boca até o ánus e tem origem ainda não conhecida. Com a incorporação do medicamento Certolizumab Pegol a expectativa é amenizar os sintomas e melhorar a qualidade de vida do portador da doença. <a href="https://goo.gl/22fGe">https://goo.gl/22fGe</a></td>
<td><a href="https://www.facebook.com/175330465818911/posts/146867603831935">https://www.facebook.com/175330465818911/posts/146867603831935</a></td>
<td>5297</td>
</tr>
<tr>
<td>Se você identificar alguns destes sinais procure um médico na unidade de saúde mais próxima e informe sobre qualquer viagem para áreas de risco nos 15 dias anteriores ao início dos sintomas. <a href="https://goo.gl/EPQbUl">https://goo.gl/EPQbUl</a></td>
<td><a href="https://www.facebook.com/175330465818911/posts/14578712677568818">https://www.facebook.com/175330465818911/posts/14578712677568818</a></td>
<td>4634</td>
</tr>
<tr>
<td>Confira na receita ilustrada como deixar o feijão mais saboroso com menos óleo no preparo e menos sal. Acesse o blog da saúde e veja outras dicas para ter hábitos alimentares mais saudáveis em 2017. <a href="https://www.blog.saude.gov.br/vuvSng">https://www.blog.saude.gov.br/vuvSng</a></td>
<td><a href="https://www.facebook.com/175330465818911/posts/1466453283364283">https://www.facebook.com/175330465818911/posts/1466453283364283</a></td>
<td>3740</td>
</tr>
<tr>
<td>Confira o esquema vacinal contra o HPV para meninos e avise seus amigos! A prevenção começa desde cedo. #VacinaHPV <a href="https://goo.gl/sY41aR">https://goo.gl/sY41aR</a></td>
<td><a href="https://www.facebook.com/175330465818911/posts/146186763833935">https://www.facebook.com/175330465818911/posts/146186763833935</a></td>
<td>3715</td>
</tr>
<tr>
<td>A pressão arterial é responsável por dar força ao sangue para que ele percorra o caminho que precisa dentro do nosso corpo levando oxigênio e nutrientes para os órgãos. Para manter a pressão arterial equilibrada é fundamental beber água. <a href="https://www.blog.saude.gov.br/lxgjak">https://www.blog.saude.gov.br/lxgjak</a></td>
<td><a href="https://www.facebook.com/175330465818911/posts/1464538363565225">https://www.facebook.com/175330465818911/posts/1464538363565225</a></td>
<td>3233</td>
</tr>
<tr>
<td>A definição da faixa etária da #VacinaHPV para os meninos tem como objetivo proteger as crianças antes do início da vida sexual e portanto antes do contato com o vírus. <a href="https://goo.gl/sY41aR">https://goo.gl/sY41aR</a></td>
<td><a href="https://www.facebook.com/175330465818911/posts/1464538363564283">https://www.facebook.com/175330465818911/posts/1464538363564283</a></td>
<td>3050</td>
</tr>
<tr>
<td>Você ainda não é doador de sangue? Que tal começar e ajudar a salvar vidas? #doesangue</td>
<td><a href="https://www.facebook.com/175330465818911/posts/1467165346635410">https://www.facebook.com/175330465818911/posts/1467165346635410</a></td>
<td>2417</td>
</tr>
</tbody>
</table>

Source: elaborated by authors, 2018.
Comments on the Ministry of Health (MS) fanpage highlights vaccination of boys against HPV, which explains the frequency of the word “vaccine.” However, such expression also appears in other posts. The comments relate “health”, “prevention”, “education” and “quality”, which points out that users perceive the importance of health prevention. It still relates “vaccine”, “lack” and “health care unit”.

Image 02 – Most frequent words in comments at Ministry of Health’s fanpage

Source: elaborated by authors, 2018.
The sentiment analysis reveals more lenient comments posted on the MS page. Critics lament the agency’s failure to answer questions, offer medication or vaccinations at public health clinics. Such criticisms indicate that a broader action of the organ is expected. It is a different dynamic from the one on the MEC page, where an agency action can be interpreted as intervention or abuse of the autonomy of higher education institutions, for example.

The six negative comments lament the prevalence of diseases and encourage adherence to MS campaigns (2, or 33.3%). They also criticize the lack of vaccines at public health care units (1, or 16.6%). Three comments (50%) correct posts: criticism is made of the use of the term carrier to designate who has Chron’s Disease, and a post about Day of the Sanitary Physician was celebrated on that date, when in fact it was of Day of Sanitary Professional. The last comment endorses agency’s research, but criticizes the lack of celerity in the execution of planned actions.

Among neutral comments (78), 94.8% (74) are mentions to other users or content. Positive comments (12) are divided into posts that praise actions, while also requesting that questions be answered (6, or 50%), two endorsements (16.6%) and four (33.3%) nominations. Rondônia (RO) and Rio Grande do Norte (RN) are the Brazilian states with the worst indications in the comments, due the fact that the first one is a former is a risk zone for yellow fever and, in the second, vaccines are lacking.

80% of the total comments in all posts are mentions to other users. They occur in postings on vaccination campaigns, healthy eating tips, among others. Already 10% of all comments are doubts: users requi-
red clarification about Ministry of Health campaigns. The fanpage did not answer those demands.

4.3 Federal Senate

The Table 3 presents analyzes posts of the Federal Senate fanpage:

Table 02 – Federal Senate’s fanpage selected posts

<table>
<thead>
<tr>
<th>SELECTED POSTS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>LEGISLATIVE BRANCH</strong></td>
</tr>
<tr>
<td><strong>SENADO FEDERAL</strong></td>
</tr>
<tr>
<td><strong>(FEDERAL SENATE)</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Post text</th>
<th>Link</th>
<th>Likes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Foi o ditador romano Júlio César quem decidiu que o ano começa-ria em 1º de janeiro.</td>
<td><a href="http://bit.ly/2INRq4A">http://bit.ly/2INRq4A</a></td>
<td>18620</td>
</tr>
</tbody>
</table>

Source: elaborated by authors, 2018.

The word “tax” appears in a post that discussed income tax exemption for teachers. The users relate expressions such “investment”, “health”, “billing”, “condition”, “classroom” and “education”. “Brazil” is
related to “shame”, “problem” and “Congress”. “Politician” is allied to “corruption”. The comments show a representative crisis speech and relates politics and corruption.

The most commented theme is consumer rights. It is a policy of the Senate fanpage to post contents related to such subject. Users criticize telecommunication companies, denouncing their abuse with customers. Fourteen comments (32.5%) deal negatively with such companies. The Executive branch agencies that regulate the sector are criticized in four comments (about 10%).

There was also criticism to a project that discusses breastfeeding in public places. Among 13 comments dedicated to the theme, only two (15.4%) argue that the mother should have special care breastfeeding in public. The rest points out that the baby should be fed to whenever he feels hungry, regardless of location. In turn, 21 comments discussed a proposed amendment to the Brazilian Constitution about rules for civil service exams. Of these, seven (33.3%) criticize managers who launch new exams before hiring personnel approved in previous exams.

Thirteen (7%) comments criticize the minimum wage readjustment, viewing it with irony. According to the users, it would not increase the purchasing power of the worker. Nineteen (10%) comments discussed the High School. Only four (21%) defended the proposal, while the rest criticized it for several reasons. Some comments question, for example, why the subject of Moral and Civics, present in Elementary School’s curriculum during Brazilian dictatorship, is not reintroduced into the curriculum.
4.4 Chamber of Deputies

Analyzes posts of Chamber of Deputies' fanpage are demonstrated in Table 04:

The frequency of terms “women” and “quota” is due to post that discussed a bill, which reserve 25% of jobs in public security to women. Similarity analysis points out that such words are also related “absurd”, “competence”, which points out a controversy in which the project is inserted. Sentiment analysis shows high frequency of negative comments on the subject. All of them strongly criticize the bill, defending a “meritocracy”: 

Source: elaborated by authors, 2018.
**SELECTED POSTS**

**LEGISLATIVE BRANCH**
**CÂMARA DOS DEPUTADOS**
(CHAMBER OF DEPUTIES)

<table>
<thead>
<tr>
<th>Post text</th>
<th>Link</th>
<th>Likes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Projeto da Câmara assegura ao idoso aposentado o direito de não pagar os tributos federais incidentes nos medicamentos vendidos sob prescrição médica. O texto já foi aprovado pela Comissão de Defesa dos Direitos da Pessoa Idosa. goo.gl/Wn6hUD</td>
<td><a href="http://migre.me/vY2Gi">http://migre.me/vY2Gi</a></td>
<td>866</td>
</tr>
<tr>
<td>Estão em análise na Câmara sete propostas que buscam impedir a cobrança por bagagens despachadas em voos. Recentemente a Agência Nacional da Aviação Civil (Anac) decidiu autorizar as empresas aéreas a cobrar pelo despacho de bagagens. A autorização passaria a valer a partir de 14 de março mas as propostas que tramitam na Câmara podem suspender essa decisão. O que você acha? <a href="https://goo.gl/4roZzJ">https://goo.gl/4roZzJ</a></td>
<td><a href="http://migre.me/vV2EH">http://migre.me/vV2EH</a></td>
<td>684</td>
</tr>
<tr>
<td>Projeto em análise na Câmara reserva a mulheres 25% das vagas oferecidas nos concursos da área de segurança pública. Pela proposta a reserva deverá estar explícita nos editais dos concursos. goo.gl/2mSahp</td>
<td><a href="http://migre.me/vV2En">http://migre.me/vV2En</a></td>
<td>661</td>
</tr>
<tr>
<td>A Câmara criou uma comissão especial para analisar o projeto que estabelece o regime de segurança máxima para presos envolvidos com organização criminosa. As regras têm o objetivo de impedir o contato com outros presos e monitorar as mensagens trocadas durante visitas. <a href="https://goo.gl/0J6QdL">https://goo.gl/0J6QdL</a></td>
<td><a href="http://migre.me/vV2Ec">http://migre.me/vV2Ec</a></td>
<td>513</td>
</tr>
<tr>
<td>O Congresso Nacional aprovou nesta quinta (15) as duas normas que vão regular as receitas e as despesas de 2017: a Lei de Diretrizes Orçamentárias (LDO) e o Orçamento. O salário mínimo passa dos atuais R$ 880 para R$ 945 80 - um aumento de 7.5%. Saiba mais. <a href="https://goo.gl/MBEgZM">https://goo.gl/MBEgZM</a></td>
<td><a href="http://migre.me/vY2Du">http://migre.me/vY2Du</a></td>
<td>428</td>
</tr>
<tr>
<td>Uma proposta que já está pronta para ser votada no Plenário aumenta a punição de tráfico de animais silvestres para até 5 anos de reclusão. Hoje a pena é de seis meses a um ano. O projeto foi apresentado pela Comissão Parlamentar de Inquérito (CPI) do Tráfico de Animais e teve a urgência aprovada em dezembro. goo.gl/XYaGaO</td>
<td><a href="http://migre.me/vY2CV">http://migre.me/vY2CV</a></td>
<td>357</td>
</tr>
<tr>
<td>Chegou ao Congresso a medida provisória que permite ao trabalhador sacar o dinheiro de contas do FGTS que se tornaram inativas até 31 de dezembro de 2015. O cronograma de saque será divulgado em fevereiro. <a href="https://goo.gl/HQjip4">https://goo.gl/HQjip4</a></td>
<td><a href="http://migre.me/vY2CC">http://migre.me/vY2CC</a></td>
<td>353</td>
</tr>
<tr>
<td>Câmara dos Deputados added a new photo.</td>
<td><a href="http://migre.me/vV2AO">http://migre.me/vV2AO</a></td>
<td>316</td>
</tr>
<tr>
<td>A Justiça brasileira vem adotando o bloqueio do aplicativo WhatsApp por algumas horas para pressionar a empresa a colaborar com investigações criminais. Um projeto apresentado neste ano na Câmara proíbe esse tipo de bloqueio. Qual sua opinião? Lela a íntegra da proposta: goo.gl/0fTbDa</td>
<td><a href="http://migre.me/vV26B">http://migre.me/vV26B</a></td>
<td>294</td>
</tr>
<tr>
<td>A Comissão de Viação e Transportes da Câmara aprovou proposta que permite o transporte de animal doméstico em transporte público. O animal deverá ser acomodado em caixa específica e travada. O autor do projeto argumenta que é preciso garantir o transporte quando houver necessidade de atendimento veterinário urgente. goo.gl/uAecAk</td>
<td><a href="http://migre.me/vY2AY">http://migre.me/vY2AY</a></td>
<td>282</td>
</tr>
</tbody>
</table>

**Source:** elaborated by authors, 2018.
Reactions of a connected society: comments in fanpages of Brazilian executive and legislative entities

Bro ... it’s security area ... the guys are going to select by quotas? So fuck, is there a place for the mentally ill and crippled as well? I’m seeing the day I see a guy chasing someone with a siren wheelchair ...

Image 04 – Most frequent words in comments at Chamber of Deputies' fanpage

Source: elaborated by authors, 2018.
Again, there are relations between the words “political”, “criminal”, “organization” and “corrupt”. In addition, is worthy of mention is the tag #outmaia, which rejects the Rodrigo Maia, then president of the Chamber of Deputies. The sentiment analysis points great disagreement with the political class and acute crisis of representation. Comments defend a relationship between corruption and politicians, distrusts the interests of the representatives when approving a certain bill and places them as responsible for the “debacle” of the country. On the Chamber’s page, the new value of the minimum wage is also rejected, as well as the Welfare reform, among other topics.

While the mentions are quite common in the other pages, here they only occur in a post that announces the possibility of withdrawal from the FGTS. In this post, a comment (positive) commemorates a bill that releases such money. Another positive comment posted on the Chamber’s fanpage supports Minister Luiz Fux, of the Federal Supreme Court. He was responsible for suspending voting on the amended version of the anti-corruption bill. The last positive comment of the page celebrates a bill that discusses transport of domestic animals in public transport.

One post addresses a bill prohibiting Brazil’s Justice to block access to WhatsApp. We conducted a sentiment analysis of 17 comments of such post.

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5 Brazilian Severance Pay Fund (Fundo de Garantia por Tempo de Serviço, or FGTS) is a payment destined to dismissed employees, as an insurance. Every employer must pay monthly a tax, gave to employees only in case of dismissal or retirement. However, as a way to insert money in Brazilian economy, President Michel Temer sanctioned a bill that allowed some workers to withdraw their insurance money.

6 In Brazil, judges of the Federal Supreme Court are not called Justices, but Ministers.
Reactions of a connected society: comments in fanpages of Brazilian executive and legislative entities

Thirteen (76.5%) are negative, repudiating the action of the judges. One commentary defends sentences as the only way to access communication between criminals. Two comments requested other investigative methods. Three point to the blockade as “modern dictatorship” and “coup”. There are those who say that judges does not know the encryption of the app (2), or that whoever commits this blockage practices illegal actions and must be arrested (2). One comment criticizes the intervention of the government in companies and another one affirms that the deputies “do not stop trying to screw people”. Finally, there are one comment who point out that such matter is not a theme for discussion by the Chamber of Deputies, since it is not their function to legislate about it.

Three comments defend the blockage (17.6%), which points out the use of such app for illegal actions. One comment says that breaking a judicial sentence is to act like Renan Calheiros, a Brazilian senator. The last comment (1, or 5.9%) is neutral: it has a negative image of WhatsApp, for failing to accept judicial decisions and criticizes Justice for its “lack of a strong grip”.

5 Conclusion

This research demonstrates that the reactions to posts of fanpages of the Executive Power are softer than comments posted in Legislative Power fanpages. Some factors may explain this dynamic: the nature of those powers, which makes the Executive Branch closer to the citizen than legislative houses. Although the composition of ministries is not defined by direct vote, it is the prerogative of the democratically elected President of the Republic. In addition, ministerial
bodies carry out government actions, being closer to the population. There are also indications that the user profile of those pages is also quite distinct.

The pages seem to form small “public spheres,” as Martino (2014) puts it. It is worth pointing out, however, the limitation of these spaces: most comments call other users to see the post without necessarily stimulating a debate about a particular public policy, which expresses a more informative character of such action. Criticisms of government, however, is common. Such criticisms are expressed in posts that do not discuss political actions. The post can discuss amenities like the taste for reading, but negative comments also manifest there.

Pages, in turn, are not effective spaces for digital democracy. In the model of Gomes (2005b), they would be located in the second grade of digital democracy, where public consultations are held to form the public agenda. It is important to note, however, that some pages did not open space for consultation of the citizen. On some pages, echoes of state communication seem to manifest. In the analysis, we perceived the presence of criticism of the management of a given page or the policy of exclusion of comments, an action understood as censorship. This implies that the management of a fanpage influences the public perception of a public agency. To prove this point, it is necessary some more research.

In the pages, there is a lack of dialogue with the citizen, a basic element of public communication. Such research also noticed the difficulty in evaluating the reactions of the users and in facing the cacophony and conducting an efficient and effective public debate with results. There is still a lot to go
forward, but there are some actions that could already be developed by managers, such as a citizen service and the answer to their doubts. Certainly, the actions of access to information and public transparency would increase, as would the degree of digital democracy of these pages.

It is worth mentioning, however, the limitations of this research. The analysis looks at postings from a single week, on vacation’s season. In addition, it evaluates pages with different profiles and usage policies, as well as distinct hierarchies and various institutional links. Nevertheless, our research is based on the analysis of a specific management. It would be interesting to expand such analysis in order to compare how these processes occur through team exchanges, as well as in other political terms. However, it allowed us to identify and evaluate public reactions in that context, as well as presenting methodological ways to define future researches in this context. Even though it is a temporal portrait, restricted to the analyzed publications.

Finally, the research indicates that some users express their approval or dissatisfaction on the pages. However, contrary to what was expected, the dynamic that appears most is the mention to other users. Users share the content of posts, increasing its number of views. This dynamic strengthens the place of Facebook as a space for public debate on government issues, even though is a space not completely used by the managers of the pages. It is assumed that this situation is due to the lack of staff available to the expressive public, as well as the absence of strategies that consolidate a less unilateral dynamic, which opens up possibilities for more immersive investigations.
To a limited extent, Facebook has served as a public information repository available for sharing. In this sense, this platform seems to break the limits of the official portals and their repositories, in many cases, of low usability. The usability of Facebook and its participation in citizen’s life can make these pages relevant digital sources of public information. However, this is possible only with its integration with other platforms, the creation of criteria for standardization and better service in government fanpages.

References


______. Cidade e Mobilidade. Telefones Celulares, Funções pós-


