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Mailing Address

Universidade de Aveiro
Departamento de Comunicação e Arte
3810-193 Aveiro - Portugal
E-mail: deca-jdmi@ua.pt

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Emotion and Cognition in Engagement (Editorial)

Lídia Oliveira
University of Aveiro, Portugal
lidia@ua.pt
[0000-0002-3278-0326](https://orcid.org/0000-0002-3278-0326)

Nelson Zagalo
University of Aveiro, Portugal
nzagalo@ua.pt
[0000-0002-5478-0650](https://orcid.org/0000-0002-5478-0650)

Welcome to this new issue of the Journal of Digital Media & Interaction. Emotion and Cognition are two sides of the same coin in the engagement process. To understand the interdependence between cognition and emotion we can use the metaphor of a sheet of paper, that is, when we tear a sheet of paper we cannot tear the front without tearing the back! However, we all understand that the front and back of the sheet are distinct but intrinsically interdependent. The same happens with emotion and cognition, they are distinct mental processes, but intrinsically interdependent. And this interdependence is clearly present in engagement.

This issue of the Journal presents a set of texts in which, more explicitly or more implicitly, the dialectical dynamics between emotion and cognition in engagement is present. We consider that this set of texts contributes with a significant analysis and reflection for the understanding of the process, namely, with regard to the use of digital media as mediators and enhancers of the relationship between emotion and cognition in engagement. It consists of six scientific contributions:

In "***Bullshit receptivity: what matters is who said it, not what is said***", João Pedro Baptista, Anabela Gradim, and Elisete Correia address the problem of the dissemination of political disinformation as a problem for democracy. And, based on empirical data, they try to understand the factors that most potentiate bullshit, namely, party affiliation and education levels. Since the more educated people are, the less they adhere to bullshit, therefore, the greater critical and analytical spirit is, a good level of cognitive development is a good predictor against the propagation and adherence to misinformation.

Daiana Sigiliano and Gabriela Borges in "***WandaVision e os Processos Cognitivos na Produção Crítica e Criativa do Fandom Brasileiro no Twitter***" aims to analyze the cognitive processes underlying the comments posted on Twitter on the day of the premiere of the episodes Filmed Before a Live Studio Audience and Don't Touch That Dial of the WandaVision series (Disney+, 2021). For the analysis, the authors considered the studies on structural cognitive modifiability, and the idea that a process of complexification of the plots has been taking place, which will require a greater cognitive effort from the audience.

In "***Facebook's Dark Pattern Design, Public Relations and Internal Work Culture***" Pekka Kallioniemi presents the discussion of how Facebook Inc. (now Metaplatforms) has been the subject of controversy over privacy issues, dark pattern design, dissemination of misinformation, and user polarization on these topics. The author discusses these controversial issues may be at the origin of

the promotion of toxic behavior, hate speech and disinformation on the platform. Some of the discrepancies between Facebook Inc's public relations are still the subject of discussion. and the culture and internal work discussions.

Shaden Kamel in "***Exploring the affordances of popular private Facebook groups for women-only in Egypt***" presents a study of the creation and use of private Facebook groups for women only in Egypt where these groups have become very popular. In the analysis, the author uses the conceptual framework of Affordances to explain the mutual influence of the structure of Facebook groups, the perceptions of their users and their social context. One of the main conclusions is that these Facebook groups are used because they are perceived as safe spaces to express their personal and social anxieties due to their privacy and exclusivity to women.

In "***Engagement en la verificación de datos. Análisis de los vídeos más vistos de los fact-checkers iberoamericanos en YouTube en 2021***" Javier Abuín-Penas and Julia Fontenla-Pedreira underline the importance of data verification, or fact-checkers, as an essential tool to certify the veracity of published content. The authors studied the activity on YouTube of eleven Ibero-American fact checkers linked to the International FactChecking Network (IFCN) during the year 2021 and concluded that there is a great disparity in viewing and involvement, depending on the country to which each belongs.

Finally, in "***Emoções e interpretações: proposta de um artefacto educacional em média-arte digital***" João Pinto, Teresa Cardoso and Ana Isabel Soares present the artifact "Emotions to Scenes" and analyze its use in a school context, with the aim of reflecting on the conflict of interpretations made on received images and associated with emotions, testing the emotional positioning of users in relation to others who enjoyed the same experience through this digital media-art environment.

We hope this set of texts can contribute to the understanding of the balance between emotion and cognition as a fundamental issue for personal and social well-being, as well as for the processes of meaningful engagement.

Bullshit receptivity: what matters is who said it, not what is said

João Pedro Baptista
LabCom, University of Beira
Interior, University of Trás-os-
Montes and Alto Douro, Portugal
joao.pedro.baptista@ubi.pt
0000-0002-3684-1923

Anabela Gradim
LabCom, University of Beira
Interior, Portugal
anabela.gradim@labcom.ubi.pt
0000-0001-6968-1957

Elisete Correia
University of Trás-os-Montes and
Alto Douro, Portugal
ecorreia@utad.pt
0000-0002-1121-2792

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Abstract

The spread of political disinformation remains a problem for democracy. In a digital universe surrendered to the dominance of social media, motivated political reasoning can be an ally of disinformation in general. Our exploratory study is a first approach, in Portugal, to the analysis of receptivity to bullshit. The main objective is to verify how political and partisan orientation can influence the level of receptivity to pseudo-profound bullshit. We used a survey ($n = 268$) to measure participants' partisanship and ideological orientation and to identify possible political and partisan (a)symmetries regarding receptivity to pseudo-profound bullshit. Our findings revealed that individuals are less receptive to pseudo-profound bullshit attributed to political leaders than when the source is anonymous. Furthermore, partisanship, as motivated reasoning, can determine how respondents evaluate information. We found that the level of receptivity to pseudo-profound bullshit is dependent on the political alignment of the source for left and right supporters. In addition to partisan bias, our results show that people with lower levels of education are more receptive to bullshit in general, which reinforces the need to invest in digital literacy to combat disinformation.

Keywords *pseudo-profound bullshit; disinformation; political orientation; left-wing; right-wing*

1. Introduction

The current chaotic media ecosystem – in which social media has more and more power in the processes of creating and distributing content – truth, objectivity and scientific evidence are in crisis. In this digital universe, lies are disguised as legitimate news, there is greater distrust of public and political institutions, and truth and reason have lost informative authority in the face of judgments based on personal convictions (Carlson, 2018b; Kakutani, 2019; Waisbord, 2018).

It is in this post-truth era (McIntyre, 2018), in which “citizens and politicians no longer respect the truth” (Harsin, 2018, p.1), that studying receptivity or sensitivity to bullshit seems more pressing than ever. In recent years, researchers have joined efforts to identify audiences more susceptible to bullshit and which psychological factors may influence receptivity to this type of content (Čavoјová et al., 2019; Čavoјová & Brezina, 2021; Erlandsson et al., 2018; Evans et al., 2020; Gligorić & Vilotijeвиć, 2020; Littrell et al., 2022; Pennycook et al., 2015).

In the literature we find several types of bullshit: pseudo-profound bullshit (Pennycook et al., 2015), scientific bullshit (A. Evans et al., 2020), political bullshit (Gligorić et al., 2020), persuasive bullshit (Čavoјová & Brezina, 2021) or bullshit in an organizational context (Spicer, 2020).

The term bullshit became known, in an academic context, for the definition proposed by the philosopher Harry Frankfurt (2005). The author defines bullshit as statements that intend to deceive

and impress others, with total disregard for their truthfulness. Truth is an irrelevant aspect for the bullshitter. In fact, it is this indifference to the truth that distinguishes a bullshitter from a liar, since the liar is aware of the truth during the act of lying. Pseudo-profound bullshit has been the most studied. This type of bullshit tries to impress people with abstract, empty and meaningless statements (Pennycook et al., 2015). Pseudo-profound bullshit corresponds to sentences syntactically correct but formed by random linguistic elements, originating sentences that don't make sense.

The various types of bullshit that have been studied by academics are similar in the way they are composed of vague and abstract words. However, the different types of bullshit may have different goals, although the truth remains irrelevant. While the scientific bullshit, proposed by Evans et al., (2019), intended to sound true and not profound or impressive like pseudo-profound bullshit, political bullshit is intended to persuade voters and promote a particular political agenda (Gligorić et al., 2020). We can understand scientific bullshit "as a form of communication that relies on obtuse scientific jargon to convey a false sense of importance or significance" (Evans et al. 2020, pp. 401-402). Like the pseudo-profound bullshit its meaning is meaningless, but the statement is constructed based on scientific terminology. Political bullshit is not as vague as pseudo-profound bullshit, but it remains something banal and without regard for the truth, such as the phrase: "I believe in America" (Gligorić et al., 2020). On the other hand, persuasive bullshit, although intended to be persuasive like political bullshit, are aimed at the bullshitter, who also seeks to impress, appear intelligent and appear to be very knowledgeable about a particular subject (Čavojová & Brezina, 2021).

Based on the work of Pennycook et al., (2015), there are several studies that have analyzed the effect of source credibility (Gligorić & Vilotijević, 2020; Ilić & Damnjanović, 2021), cognitive ability in information processing (Čavojová et al., 2019; Littrell et al., 2022; Shane Littrell et al., 2021a) or political attitudes (Burger et al., 2020; Nilsson et al., 2019; Petrocelli, 2021; Sterling et al., 2016) on the receptivity of pseudo-profound bullshit. Most studies have found positive correlations between pseudo-profound bullshit receptivity and conservatism (Nilsson et al., 2019; Pfattheicher & Schindler, 2016), lack of cognitive effort to information processing (Deppe et al., 2015; Jost et al., 2003; Onraet et al., 2015) and overconfidence in the ability to detect bullshit or by relying on a certain source (S Littrell et al., 2022; Shane Littrell et al., 2021a; Pennycook & Rand, 2019a). In addition, people's personalities can also influence their receptivity to bullshit. People who tend to believe more easily in paranormal phenomena and conspiracy theories, who report daily spiritual experiences and who have ontological confusion tend to be more receptive to bullshit (Čavojová et al., 2020). Walker et al., (2019) also found that individuals with a greater tendency to perceive illusory patterns tend to be more receptive to pseudo-profound bullshit. In the same sense, makes the art grow profounder. Turpi et al.(2019) found that when someone titles a work of art with a profound title, it makes people rate art as more profound than paintings with mundane titles or no titles at all. These findings may justify the use of bullshit in political speeches in order to make them more persuasive and impressive.

Given this scenario, it is possible to verify that the effect of political and partisan prejudice on receptivity to pseudo-profound bullshit has been less explored in this field of study. We know, however, that motivated political reasoning has been heavily researched in relation to the discernment and spread of fake news (Pennycook & Rand, 2019a; Faragó et al. 2019; Baptista et al. 2021a,

2021b). Due to the semantic proximity between bullshit and fake news (Jaster & Lanius, 2018; Mukerji, 2018) and the positive correlation between receptivity to bullshit and belief in fake news (Pennycook & Rand, 2019b), we consider that the study of bullshit, in a digital context, is a valuable contribution to the debate about disinformation in general.

Our study focuses on Portugal consists of an exploratory analysis. Other studies have sought to assess the ability of the Portuguese adult population to distinguish fake news from news and to understand the effect of political and partisan orientation in discerning of political fake news (Baptista et al. 2021a, 2021b). However, in Portugal, no study has proposed to examine the level of receptivity to bullshit, nor has it tried to understand which factors can influence its receptivity. This investigation is a first approach to the study of receptivity to bullshit in Portugal. The main objective is to examine how political and party orientation are related to receptivity to pseudo-profound bullshit. Using political stimuli, we sought to identify possible political and partisan (a)symmetries in relation to susceptibility to bullshit. We also intend to verify the extent to which sociodemographic aspects may be related to receptivity to pseudo-profound bullshit.

2. Political attitudes and receptivity to bullshit

Confirmation bias and motivated reasoning, as cognitive mechanisms inherent to the human being, make people more receptive to information in line with their pre-existing beliefs and more critical and prone to reject information that is not in line with their identity or worldviews (Taber & Lodge, 2006; Nickerson, 1998; Lewandowsky et al. al. 2013; Nyhan & Reifler, 2010). Motivated political reasoning can bias the way people seek and select information (Messing & Westwood, 2014; Stroud, 2010) and how they interpret it (Lodge & Taber, 2005; Nickerson, 1998). There is evidence that political and partisan prejudice can be an obstacle to combating the proliferation of disinformation. Several studies have noted that party identity hampers the role of fact-checkers in correcting information (Grady et al., 2021; Nyhan & Reifler, 2015; Shin & Thorson, 2017) and is increasingly related to how individuals consume and share political fake news (Baptista et al. 2021a, 2021b; Faragó et al., 2019; van der Linden et al., 2020).

As for the relationship between political ideology and susceptibility to disinformation, the studies tends to agree that right-wing or conservative people are more vulnerable to disinformation (Baptista et al., 2021a, 2021b; Calvillo et al., 2020; Douglas, 2018; Grinberg et al., 2019; Guess et al., 2019; Mancosu et al., 2017; Sinclair et al., 2020). At the same time, another line of studies argues that both sides - leftists or liberals and rightists or conservatives - have a propensity to accept disinformation content in line with their beliefs (Ditto et al., 2019; Faragó et al., 2019; Scherer et al., 2021; Uscinski et al., 2016).

During information processing, statements attributed to credible and reliable sources seem to induce people to more easily believe them. While Ehrlich & Gramzow (2015) have shown that people tend to regard their party's politicians as more honest than opposition politicians, Clementson (2018) noted that voters are not as accurate in evaluating statements by politicians from their parties as they are from an opposing politician. Regarding receptivity to bullshit, several studies have found that the

level of acceptance and belief increases if it belongs to a reliable source (Gligorić & Vilotijević, 2020; Ilić & Damnjanović, 2021; Nilsson et al., 2019). This influence of the credibility of the source remains, even if the classification of various types of bullshit is at stake (Littrell et al., 2022). In addition, source-motivated reasoning during bullshit classification seems to override cognitive ability (Ilić & Damnjanović, 2021; Nilsson et al., 2019). Ilić & Damnjanović (2021) argue that sources that are unreliable or that are not politically aligned can stimulate people, leading them to engage in a more effortful and analytical process of information (Evans, 2008; J. S. Evans & Stanovich, 2013), which can motivate greater accuracy in bullshit detection.

Regarding the influence of political ideology, some studies point to right-wing or conservative people as being more receptive to bullshit (Evans et al., 2020; Nilsson et al., 2019; Pfattheicher & Schindler, 2016). Simultaneously, Sterling et al., (2016) suggest that moderate subjects are more receptive to bullshit than extremist people of the left or right. However, in a study in which participants rated the depth of bullshit attributed to left and right-wing leaders, as well as to factual statements, Petrocelli (2021) generally found no ideological asymmetries regarding bullshit receptivity.

3. Portuguese party system in the left-right political dimension

Much of the research focusing on the North American scenario has resorted to comparative analyses that are based on two-party systems, which oppose Democrats (or liberals) to Republicans (or conservatives). These analyses can be limiting, taking into account that there are many countries with multiparty political systems that, within the left-right political dimension, represent different ideological fields. It should be considered that there are several *lefts* and *rights* across the political spectrum (Baptista & Loureiro, 2018; Bobbio, 1995; Lachat, 2018) that aggregate a diversity of social and economic values that do not have to be completely antagonistic.

In Portugal, the left-right dichotomy has served as a heuristic element to explain the vote of citizens and the competitive behavior of political parties (Freire, 2015; Medina, 2015) and from 1975 onwards, with the fall of the Estado Novo dictatorial regime, the Portuguese democracy began to operate on the basis of a multiparty system.

Until 1999, there were four parties with parliamentary representation: Partido Comunista Português (*Portuguese Communist Party*, PCP) and Partido Socialista (*Socialist Party*, PS) in the left; and Partido Social Democrata (*Social Democratic Party*, PSD) and Centro Social Democrático (*Social Democratic Center*, CDS) in the political field of the right. On the left-wing side, PCP is part of the group of conservative communists, defending Marxist-Leninist ideals (Freire, 2017; Pereira, 2016) and PS, which has proved over the years to be a center-left party defending social democracy and is currently the party that governs Portugal, with an absolute majority obtained in the previous elections (2022). PS (center-left wing) and PSD (center-right wing) are moderate parties and the only ones, so far, that have been in the leadership of the country. The choices of the electorate fall predominantly just into these two parties. Several studies have found that, in programmatic terms, PS and PSD diverge very little (Guedes, 2012, Guedes, 2016). CDS assumes itself as a right-wing, conservative and catholic party (Robinson, 1996).

Later, in 1999, Bloco de Esquerda (*Left Bloc*, BE), a party associated with the libertarian ideals of the new left, in defense of the environment, ethnic minorities and the rights of the LGBT community, joined the Portuguese Parliament (Freire, 2005; Lisi, 2009). The new left (see Flanagan, 1987; Freire, 2009) gained greater representation in 2014 with the entry of an animal rights party, the Pessoas-Animais-Natureza (*People-Animals-Nature*, PAN) to the Parliament.

Last legislative elections, in January 2022, the parties that had recently entered parliament strengthened their parliamentary representation, especially the populist radical right-wing party that increased its number of deputies from one to 12 deputies. Until 2019, the radical right had been a “marginal phenomenon” (Faria & Marchi, 2018) and, currently, the Chega (*Enough!*, CH) – identified as belonging to an anti-system, radical and populist, anti-elitist, nationalist and ultra-conservative right (Lisi et al., 2021; Mendes & Dennison, 2020) – has become the third political force in the country. The Iniciativa Liberal (*Liberal Initiative*, IL), a very recent party, has also increased the number of deputies and belongs to the neoliberal right, which defends economic and social liberalism (Jalali et al., 2021).

On the left, Livre (*Free*, L) elected a deputy and promotes an ecological, libertarian and pro-European left. In addition, it also defends policies associated with the *new left*, albeit in combination with the traditional left (Fernandes & Magalhães, 2020; Freire, 2017).

It should be noted that CDS lost national parliamentary representation last elections. However, the party continues to have municipal representation throughout the country and is a historic party of Portuguese democracy.

4. Methods

The main goal of this work is to investigate the effect of partisan bias and ideological orientation on the level of receptivity to pseudo-profound bullshit among Portuguese adults. Receptivity to pseudo-profound bullshit (Pennycook et al., 2015) was analyzed according to (1) partisanship, (2) ideological orientation and (3) sociodemographic characteristics of the participants. For this purpose, an exploratory, self-response and convenience survey was made available via the internet to participants aged 18 years or over. In our study, 268 individuals participated voluntarily and anonymously. In the introductory description of the survey, participants were told that the study focused on the consumption of “inspirational statements” on social media. In order to ensure that participants would respond as if they were in their social media feeds, respondents were not informed or warned that they would be evaluating pseudo-profound bullshit.

4.1. Participants

Our sample is composed of participants aged between 18 and 74 years ($M = 46.9$; $SD = 12.6$), with 183 (68.3) women and 85 (31.7%) men. Most participants have higher education (80.6%). Considering the respondents' level of education, 50.0% graduated, 23.5% owned a master's degree, 19% a doctorate and 19.4% had an education equal to or less than high school. The survey was available online, on Facebook, between March 9th and 24th 2022.

4.2. Instruments and participants

The survey was divided into three sections: (1) sociodemographic aspects (age, gender, education); (2) identification of ideological and party orientation; (3) exposure to pseudo-profound bullshit.

4.2.1. Receptivity to pseudo-profound bullshit

Like other studies (Littrell et al., 2021b; Nilsson et al., 2019; Petrocelli, 2021; Sterling et al., 2016), we measured bullshit receptivity according to the scale presented by Pennycook et al. (2015). In view of the presentation of the pseudo-profound bullshit, the respondents had to rate the level of depth of the statement on a 5-point Likert scale (1 – *Nothing profound*; 5 – *Very profound*).

All bullshit statements presented were automatically generated from two websites that are well known and cited in the literature for randomly generating sentences pointless, totally abstract that only correspond to a correct syntactic structure (<http://sebpearce.com/bullshit/> and <http://wisdomofchopra.com>) (e.g., Pennycook et al., 2015; Sterling et al., 2016).

To measure the effect of partisan bias on receptivity to bullshit, we created two indicators: partisan pseudo-profound bullshit (PBS) and non-partisan pseudo-profound bullshit (NPBS).

Regarding the PBS indicator, the bullshit was attributed to political leaders representing the political left or right in Portugal. All PBS statements were allegedly made by leaders of the two political families: left-wing or right-wing. The attribution of the pseudo-profound bullshit was completely random and has no political connotation. PBS is simply a set of buzzwords (the list of statements is available in supplemental material). The PBS were divided into two categories: (1) pro-left partisan bullshit and (2) pro-right partisan bullshit. The pro-left partisan bullshit was supposedly said by left-wing political leaders and the pro-right partisan bullshit was supposedly said by right-wing political leaders. Out of the total of 12 partisan bullshit statements, 6 statements were attributed to each political group. We attributed two pseudo-profound bullshit statements to each left-wing leader (António Costa, Secretary General of the Socialist Party; Catarina Martins, Secretary General of the Left Bloc and Jerónimo de Sousa, Secretary General of the Portuguese Communist Party) and to each leader of the right-wing parties (Rui Rio, Secretary General of the Social Democratic Party; André Ventura, president of Enough! and Cotrim Figueiredo, president of the Liberal Initiative)(see all bullshit statements used in supplemental materials).

For non-partisan pseudo-profound bullshit, participants were exposed to a set of 5 NPBS. These statements are, in terms of connotation or value, identical to partisan pseudo-profound bullshit, being only distinctive because they are anonymous and have no political or partisan stimulus. Taking the work of Littrell et al., (2022) as a reference, the two types of bullshit were presented in a format that is very common on social media (**Figure 1**).

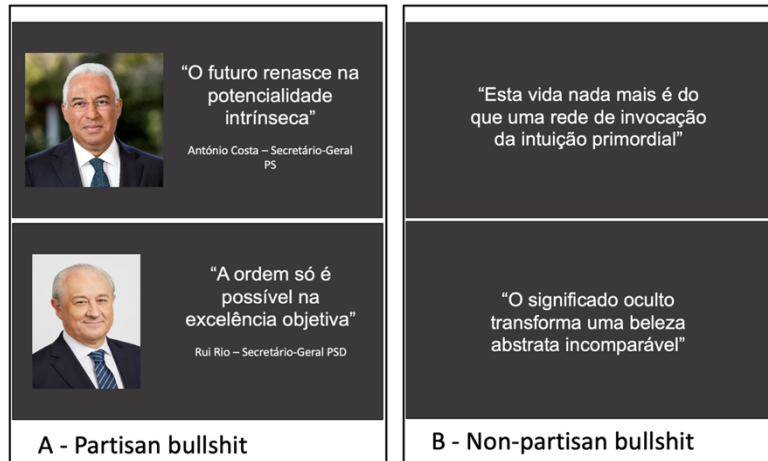


Figure 1. Example of the pseudo-profound bullshit used in the survey.

When analyzing Figure 1, we notice that the PBS (A) use visual stimuli (name of political figure, position held and photograph) that allow readers / the audience to identify the source and associating it with a party and a political field. NPBS (B) pertain to the type of “inspirational” phrases that are shared on social media, without identifying their source.

As in the study from Litrell et al.(2022) all bullshit (PBS, $n = 12$; NPBS, $n = 5$) mimic the format of images typically associated with “internet memes”. Participants' scores correspond to the average result of responses in both pseudo-profound bullshit categories: PBS($M = 2.51$; $SD = .85$; $\alpha = .91$) and NPBS ($M = 2.92$; $SD = 1.03$; $\alpha = .87$).

4.2.2. Party and ideological orientation

Based on the work of Baptista et al., (2021) we measure party orientation taking into account two indicators: (1) the intention to vote in elections and (2) the level of sympathy for each political party with parliamentary representation. Regarding the intention to vote, we formulated the following question: “if the elections for the Parliament were tomorrow, which party would you vote for?” Respondents were able to choose 10 closed response options: 1 – BE, 2 – PCP, 3 – CDS, 4 – CH, 5 – PS, 6 – PSD, 7 – PAN, 8 – L, 9 – IL, 10 - Other. PS would be the party with more votes (30.2%) and CDS the party with less votes (1.5%). For our analysis, the variable was coded into two categories: (1) vote for left-wing parties (includes all participants who would vote for BE, PCP, PS, PAN and L) and (2) vote for right-wing parties (includes all individuals who would vote for CDS, CH, PSD and IL).

To measure the level of sympathy by party, participants completed the 5-point party sympathy measure for each party (1 – no sympathy; 2 – little sympathy; 3 – some sympathy; 4 – much sympathy; 5 – a lot of sympathy, $\alpha = .63$). PS is the party that participants are most sympathetic to ($M = 2.85$; $SD = 1.13$) and CH is the party that participants are least sympathetic to ($M = 1.38$; $SD = .81$).

Regarding the measurement of ideological orientation, participants positioned themselves on two measures of political or ideological orientation, corresponding to the Left-Right political dimension ($M = 3.56$; $SD = 1.36$) and the liberal-conservative scale ($M = 2.95$; $SD = 1.11$) with response options ranging from 1 (very left) to 7 (very right) and 1 (very liberal) to 7 (very conservative).

These scales have been used in several studies that correlate the effect of political ideology with susceptibility to disinformation (Faragó et al. 2019; Baptista et al. in press). Both scales were later codified in different political fields. In the left-right political dimension, participants were grouped into three political groups: left-wing (1-3), center (4) and right-wing (5-7). Regarding the liberal-conservative dimension, we grouped individuals as follows: liberal (1-3), intermediate (4) and conservative (5-7).

5. Results

5.1. Descriptive analysis

In general, participants were more predisposed to accept non-partisan bullshit (M = 2.92; SD = 1.03) than political-partisan pseudo-profound bullshit (M = 2.51; SD = 0.85). In our findings most participants considered the non-partisan statements to be profound. Only about 36% of respondents rated non-partisan bullshit as “nothing” or “little profound”. The vast majority showed high levels of receptivity to these statements (**Table 1**).

Table 1. Level of receptivity attributed to the total of PBS and NPBS

	M	SD	α	1	2	3	4	5	Total	N
				%	%	%	%	%	%	
<i>Non-partisan pseudo-profound bullshit</i>	2.92	1.03	.91	19.5	16.2	28.8	23.9	11.6	100	268
<i>Pseudo-profound partisan bullshit</i>	2.51	.85	.87	28.2	21.3	27.7	16.3	6.5	100	268

Note: α = Cronbach’s alpha reliability

Analyzing the level of receptivity attributed to partisan pseudo-profound bullshit and considering that the statements are accompanied by the name, political position and image of the political figure, it is observed that this political stimulus seems to reduce receptivity to the statements. About 50% of participants considered PBS as “nothing” or “little profound”, which denotes that participants were more receptive to bullshit without political or partisan stimuli. Besides, it is important to mention that the level of receptivity to both bullshit (PBS and NPBS) is positively and significantly correlated ($r = .688, p = .01$).

5.2. The effect of political-ideological orientation

In order to investigate the relationship between political-ideological orientation and the level of receptivity to pseudo-profound bullshit, we performed two independent multivariate analyses (MANOVA), followed by univariate analyzes of variance. Regarding the level of receptivity to bullshit in general, our results did not show significant differences in self-placement in the left-right scale ($F_{(2,259)} = .16, p = .984$) and in self-placement in the liberal-conservative political dimension ($F_{(2,259)} = .199, p = .755$) (**Table 2**).

Table 2. Pseudo-profound bullshit receptivity level by political ideology

	Left-wing		Centre		Right-wing		<i>F</i>	<i>p</i>
	M	SD	M	SD	M	SD		
BS pro-left	2.76	.94	2.63	1.02	2.30	.94	4.903	.006
BS pro-right	2.29	.85	2.52	.93	2.56	.87	2.676	.071
All bullshit	2.63	.84	2.69	.86	2.59	.83	.016	.984

	Liberal		Intermediate		Conservative		<i>F</i>	<i>p</i>
	M	SD	M	SD	M	SD		
BS pro-left	2.63	1.00	2.55	.95	2.51	.90	.276	.750
BS pro-right	2.42	.89	2.25	.72	2.54	.94	.882	.415
All bullshit	2.64	.85	2.58	.71	2.61	.88	.282	.755

To verify whether participants are affected by politically motivated reasoning during the pseudo-profound bullshit trial, we have only considered partisan pseudo-profound bullshit (ie, bullshit that present political visual stimuli). Through a MANOVA, we found a significant effect of the left-right political dimension on the composite of variables (Wilk's $\lambda = .832$, $p < .001$) (Table 2). Subsequently, ANOVA identified statistically significant differences regarding the level of receptivity to bullshit attributed to left-wing political leaders ($F_{(2,265)} = 5.254$, $p = .006$). We found no significant evidence of this political dimension on pro-right partisan bullshit. Post-hoc tests revealed a partisan bias on the part of individuals who put themselves on the left-wing. Leftists displayed a greater tendency than right-wing subjects to accept bullshit attributed to left-wing political leaders. This evidence is not possible to verify regarding right-wing individuals, since they seem not to have been affected, at least significantly, by motivated political reasoning.

Regarding the liberal-conservative political dimension, the results suggest that it does not have a significant effect on the level of receptivity to partisan pseudo-profound bullshit (Wilk's $\lambda = .983$, $p = .329$).

We tried to understand how the socio-demographic characteristics of left-wing respondents may be related to the results and we did not find any significant evidence. This indicator suggests that political orientation may be a stronger predictor for consuming bullshit than individuals' age or education.

5.3. The effect of partisan orientation

To measure the influence of partisanship on the level of receptivity of pro-right and pro-left partisan bullshit, we considered two parameters: (1) vote intention and (2) party sympathy. To analyze the effect of voting intention on receptivity to partisan bullshit, we coded the variable into individuals who would vote for a left-wing party ($n = 139$) and individuals who would vote for a right-wing party ($n = 104$). People who did not reveal their vote were not considered for analysis. Our results show a significant effect of voting intention on receptivity to pseudo-profound partisan bullshit (Wilk's $\lambda = .768$,

$p < .001$). The univariate analysis of variance show that there are statistically significant differences in relation to pro-right bullshit ($F_{(1,241)} = 8.629, p = .004$) and pro-left bullshit ($F_{(1,241)} = 11.659, p < .001$). Comparing the averages of the level of receptivity of the statements, we can see that there is a biased judgment of the partisan bullshit either to the left-wing or to the right-wing. While people who would vote for left parties have higher values (vs right) in relation to pro-left bullshit, people who would vote for the right also have higher values (vs left) with respect to pro-right bullshit (**Table 3**)

Table 3. Pseudo-profound bullshit receptivity level by voting intention

	Left party vote		Right party vote		<i>F</i>	<i>p</i>
	M	DP	M	DP		
BS pro-left	2.83	.93	2.41	.96	11.625	<.001
BS pro-right	2.33	.84	2.66	.88	8.629	.004

Regarding the effect of partisan sympathy on receptivity to partisan bullshit, our findings also demonstrate a greater receptivity to partisan bullshit compatible with the individuals' partisan orientation. By calculating Pearson's coefficient, we verified that there is a positive and significant correlation between sympathy in left-wing parties and the level of receptivity of pro-left bullshit ($r = .278, p < .01$) and between sympathy in parties and pro-right bullshit receptivity ($r = .296, p < .01$). In other words, our results indicate that the higher the sympathy for left-wing parties, the greater the receptivity of participants to pro-left bullshit and the same happens for right-wing participants to pro-right bullshit. It is also important to highlight that sympathy with left and right parties is negatively and significantly correlated ($r = -.243, p < .01$). That is, the greater the sympathy of individuals in right-wing parties, the lower the sympathy in left-wing parties and vice versa.

5.4. Bullshit receptivity and socio-demographic factors

Regarding the effect that the sociodemographic aspects (age, education and gender) of the participants can have on the general level of receptivity to bullshit, our results did not show statistically significant differences in relation to their age ($F_{(3,252)} = .781, p < .505$) and gender ($F_{(1,266)} = .721, p < .397$). However, our findings revealed statistically significant differences in relation to the participants' level of education ($F_{(3,264)} = 3.022, p = .03$). Post hoc tests identified significant differences between individuals with a lower level of education (≤ 12 th grade) and subjects with a higher level of education (doctorate degree), with doctorates showing a lower tendency to accept bullshit in general (**Table 4**). In this first analysis, we consider the totality of the bullshit presented, in order to be able to make a global assessment of the receptivity to bullshit.

Table 4. Means (M) and standard deviations (SD) of bullshit receptivity by demographic factors

Bullshit receptivity	
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		Bullshit general			Partisan Bullshit			Non-partisan Bullshit		
		M	SD	<i>p</i>	M	SD	<i>p</i>	M	SD	<i>p</i>
Gender	Male	2.57	.88	.397	2.45	.93	.444	2.84	1.02	.407
	Female	2.66	.82		2.54	.82		2.95	1.03	
Age	18-35	2.60	.74	.505	2.53	.76	.715	2.78	.93	.325
	36-50	2.66	.81		2.52	.81		2.97	.99	
	51-60	2.69	.90		2.55	.94		3.02	1.07	
	≥61	2.46	.94		2.36	.94		2.71	1.15	
Education	≤ 12 ^o	2.89	.57	.03	2.70	.62	.186	3.34	.69	.001
	Deg.	2.56	.85		2.45	.85		2.81	1.14	
	MS.	2.67	.85		2.56	.90		2.96	1.02	
	PhD	2.31	1.14		2.27	1.16		2.40	1.20	

However, dividing pseudo-profound bullshit into two categories (PBS and NPBS), our findings do not reveal significant differences between people with lower and higher education in relation to bullshit who exhibit political stimuli ($F_{(3,264)} = 1,615, p < .186$). However, we found significant differences between the less and more educated groups in relation to non-partisan pseudo-profound bullshit receptivity ($F_{(3,264)} = 5.355, p < .001$). Thus, the results suggest that the level of education does not seem to be a relevant factor in relation to political stimulus and motivated political reasoning.

6. Discussion and Conclusions

Our findings showed that political stimulation by attributing bullshit to a political actor, reduces receptivity to pseudo-profound bullshit in general. Pseudo-profound bullshit with no political or partisan source achieved a higher level of receptivity than bullshit with political stimuli. Our results seem to suggest that politicians can be seen as unreliable sources and can have a challenging effect on information processing (Ilić & Damjanović, 2021). There are several studies that confirm a general decline in voters' trust in political agents and in public and political institutions (Bøggild, 2020; Issacharoff, 2018), including in Portugal, where only 18% tend to trust political parties¹. The bad reputation of politicians in general helps to understand our results, knowing that the lack of credibility of the source reduces receptiveness to statements (Gligorić & Vilotijević, 2020; Littrell et al. 2022). For example, Littrell et al. (2022) noted that people became more receptive to pseudo-profound bullshit attributed to reputable sources than when attributed to anonymous sources.

In this sense, our study raises two important questions. On the one hand, people are more receptive to anonymously sourced pseudo-profound bullshit than when it is supposedly said by politicians. On the other hand, a large proportion of individuals considered pseudo-profound bullshit to be profound. This evidence seems to be less encouraging and accentuates the existing problem of this type of disinformation.

¹ Access the Public Opinion Portal at: <https://www.pop.pt/pt/grafico/a-politica/confianca-nos-partidos-politicos/pt/?colors=pt-0>ype=col> (accessed on 21 april 2022).

Overall, we found no significant evidence of the effect of left-right and liberal-conservative political orientation on bullshit receptivity when analyzed together. However, when we consider only bullshits with political stimuli, we observe that political orientation on the left-right scale has a significant effect only on receptivity to pseudo-profound bullshit attributed to left-wing politicians. Left-wing participants were more likely to accept aligned pseudo-profound bullshit than right-wing participants, who did not show this evidence especially with bullshit from right-wing politicians.

In a way, our findings seem to suggest that motivated reasoning operates in a politically different way, as other studies have shown (Pfattcheicher & Schindler, 2016; Baptista et al. 2021a, 2021b). However, in none of these works were left-wing people more vulnerable to compatible content than right-wing people, as we found in our study. The vulnerability of left-wing people (vs. right-wing people) can be understood if we consider that they tend to be more open-minded to new ways of thinking (Jost et al. 2003, 2017).

Furthermore, we can also argue that people on the left are likely to find politicians more trustworthy than people on the right in relation to their own politicians. However, it is known that both extreme ideological positions, either on the left or on the right, tend to have less trust in politics and politicians (Krouwel et al., 2017).

Besides, our results did not find any influence of the liberal-conservative scale on bullshit receptivity, contrary to what was found in other studies (Nilsson et al. 2019; Evans et al. 2020). This finding can be explained by the fact that we used only one self-placement scale for each political dimension. In other studies that identified an ideological asymmetry in relation to susceptibility to misinformation, participants were ideologically ranked according to their opinion in relation to a set of values (Baptista et al. 2021a).

In partisan terms, our study measured partisanship by considering two indicators: the intention to vote and the sympathy shown by each political party. Unlike political ideology, in the case of partisanship the confirmation bias was consistent, both left and right, in receptivity to pseudo-profound partisan bullshit. In other words, people who would vote for left-wing parties and with more sympathy for left-wing parties have higher rates of receptivity to the pseudo-profound bullshit attributed to left-wing politicians, and the same is true of people who vote for right-wing parties and with more partisan sympathy on the right towards the pro-right pseudo-profound bullshit.

If previous results seemed to suggest a political asymmetry in relation to receptivity to politically aligned bullshit, partisanship proves to be a strong predictor in relation to acceptance of pseudo-profound bullshit. In accordance with other studies (Ehrlich & Gramzow, 2015; Clementson, 2018; Petrocelli, 2021), bullshit receptivity depends on the alignment of the source, and party orientation reacts more evidently to the stimulus of a directly associated source. Both left and right supporters are more likely to blindly judge the content of snotty-profound bullshit based on its source.

In addition to the influence of party and political orientation, we also sought to understand the receptivity to bullshit in accordance with the sociodemographic aspects of the participants. Although some studies point to older people as being more vulnerable to disinformation, namely fake news (Guess et al. 2019; Baptista et al. 2021a, 2021b; Grinberg et al. 2019), our findings did not find a significant effect of age on bullshit receptivity, which may also suggest that the age factor may have a

different effect that may be dependent on the type of online disinformation. However, corroborating the literature, we observe that there is a significant tendency for people with low education to be more receptive to pseudo-profound bullshit than people with high education (Erlandsson et al. 2018).

Overall, our study is consistent with the findings in the literature in the way it reinforces the importance of the source as a heuristic shortcut for judging information, revealing that this propensity occurs in both left and right-wing supporters. Furthermore, the results suggest that, in case the source is “unreliable” as politicians appear to be, anonymous pseudo-profound bullshit may be more credible, even if they don't make sense and have no meaning.

These findings lead us to question the Portuguese political trust levels and how these indices may be influencing consumption and the dissemination of disinformation. We believe that it would be important to try to understand how these variables are related in the Portuguese context. Our study also reinforces the idea that political bias influences how the audience understands information. We demonstrate that political prejudice is present even during the judgment of meaningless statements and can be an ally of misinformation in general.

Furthermore, our study may serve as a warning for a greater focus on digital literacy, with lower levels of education being positively associated with greater receptivity to pseudo-profound bullshit. As other studies have shown, the less educated audience appears to be more vulnerable to disinformation in general, regardless of its format.

Finally, we recognize that our study is an exploratory research, with a non-probabilistic sample, which was its biggest limitation. However, as this is a first approach in Portugal to the study of the relationship between receptivity to pseudo-profound bullshit and political and partisan orientation, we believe that its findings are an addition to the literature and to the contemporary debate on disinformation.

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WandaVison e os Processos Cognitivos na Produção Crítica e Criativa do Fandom Brasileiro no Twitter

(WandaVison and the Cognitive Processes in the Critical and Creative Production of Brazilian Fandoms on Twitter)

Daiana Sigiliano

Universidade Federal de Juiz de Fora, Brasil

daianasigiliano@gmail.com

[0000-0002-5163-9926](tel:0000-0002-5163-9926)

Gabriela Borges

Universidade do Algarve, Portugal

gabriela.borges0@gmail.com

[0000-0002-0612-9732](tel:0000-0002-0612-9732)

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Abstract

This paper intends to analyze the cognitive processes operating on comments published on Twitter on the day *WandaVision's* (Disney+, 2021-) two episodes ("Filmed Before a Live Studio Audience" and "Don't Touch That Dial") were released. To discuss this issue, we used Feuerstein et al.'s (2010) studies about SCM as a lens to analyze content shared by eight Brazilian fan accounts dedicated to the *WandaVision* universe. Studies conducted since the late 1990s in the scope of televised serialized fiction highlight the process of plot complexification (Mittell, 2015; Jost, 2016). Working from this context, Johnson (2012) argues that popular culture requires greater cognitive effort from the audience. Johnson's (2012) theoretical approach presents direct dialogue with Feuerstein et al.'s (2014) concept of structural cognitive modifiability (SCM). It is concluded that in addition to reinforcing and deepening the points of the broad fictional universe of Marvel, Brazilian fans establish correlations between the telenovelas and the series, giving new meaning to the plot.

Keywords *Serial Narrative; Cognitive Process; Complex TV; Twitter; Wandavision.*

Resumo

Este artigo tem o objetivo de analisar os processos cognitivos que estão em operação nos comentários publicados no Twitter no dia do lançamento dos episódios *Filmed Before a Live Studio Audience* e *Don't Touch That Dial* de estreia da série *WandaVision* (Disney+, 2021). Para a discussão desta questão, analisamos sob a ótica dos estudos de Feuerstein et al. (2014), sobre a modificabilidade cognitiva estrutural, os conteúdos compartilhados por oito perfis gerenciados pelo *fandom* brasileiro dedicado ao universo da trama. Os estudos realizados a partir do final da década de 1990 no âmbito da ficção seriada televisiva estadunidense ressaltam o processo de complexificação das tramas (Mittell, 2015; Jost, 2016). Neste contexto, Johnson (2005) afirma que a cultura popular contemporânea exige maior esforço cognitivo do público. A proposta teórica do autor apresenta um diálogo direto com o conceito de modificabilidade cognitiva estrutural (MCE) de Feuerstein et al. (2014). Conclui-se que além de reforçarem e aprofundarem os pontos de amplo universo ficcional da Marvel, os fãs brasileiros estabelecem correlações entre as telenovelas e a série, ressignificando a trama.

Palavras-chave *Ficção Seriada; Processo Cognitivos; Complexidade Narrativa; Twitter; Wandavision.*

1. Introdução

Os estudos realizados no âmbito da ficção seriada televisiva a partir da década 1990 têm tangenciado diversos pontos da psicologia cognitiva¹ (Johnson, 2012; Esquenazi, 2010; Mittell, 2015). As discussões, que abrangem desde questões mais genéricas como a multimodalidade do ambiente de convergência até aplicações específicas relacionadas à atenção, à memória, à organização de

informações etc., são motivadas pela construção de universos ficcionais cada vez mais amplos e densos. As tramas são permeadas por camadas interpretativas e intertextuais, estimulando a compreensão crítica e a produção criativa do público nas redes sociais.

De acordo com Johnson (2012, p. 24) as séries contemporâneas “[...] têm cobrado mais esforço cognitivo dos espectadores, exercitando a mente de maneiras que trinta anos atrás seriam inéditas”. Para acompanhar a atração em sua totalidade o público deverá assistir sistematicamente todos os episódios, caso contrário não irá entender os desdobramentos da história. Como explicam Regis *et al.* (2008, p. 165), “Deixar de assistir a um único episódio pode significar a perda do nexo da trama. Sendo assim, uma boa narrativa contemporânea não exige apenas que o espectador se lembre, mas também que analise as informações”. A análise destacada pelos autores está relacionada ao modo como os arcos narrativos das séries são desenvolvidos durante as temporadas. Nesse sentido, cabe ao público correlacionar os arcos e a gama de personagens que integram as microestruturas (episódio) e macroestruturas (temporada) e que vão se entrelaçando de formas imprevisíveis. Segundo Lotz (2010), o modo de fruição narrativa das séries contemporâneas resulta em uma estrutura instável deixando muitos arcos abertos e, conseqüentemente, exigindo do público um engajamento especializado e contínuo.

Outro ponto relevante nos universos ficcionais são as lacunas informacionais deixadas propositalmente pelos roteiristas. Como explica Johnson (2012, p. 55) as séries “[...] exigem dos espectadores o trabalho de acrescentar elementos cruciais que levam a complexidade a um nível mais desafiador”. Isto é, para compreender a sequência que está no ar o público deverá acrescentar informações que foram omitidas na história. “Esses recursos, em vez de facilitar a fruição das obras populares, complicam-na exigindo muito mais esforço cognitivo do espectador do que os recursos usados nos programas anteriores” (Regis *et al.*, 2008, p. 166). As informações omitidas na trama apresentam diversas variações abrangendo elementos internos e externos ao universo ficcional, além das composições visuais. Como, por exemplo, o uso de *easter eggs*, *inner jokes*, menções a filmes e livros, entre outros.

Tendo como base as tramas produzidas na *Post-Network Era*², Johnson (2012) defende que os programas estimulam cognitivamente o telespectador a analisar situações complexas, acompanhar extensas redes informacionais, completar camadas interpretativas omitidas pelos roteiristas, compreender cruzamentos narrativos e reconhecer padrões a longo prazo. A proposta teórica de Johnson (2005) apresenta um diálogo direto com o conceito de modificabilidade cognitiva estrutural (MCE) de Feuerstein *et al.* (2014). De acordo com os autores os processos cognitivos que envolvem a MCE, ou seja, os que podem ser alterados ao longo da vida, abrangem diversas habilidades, entre elas a atenção, a organização e o sequenciamento de informação.

A partir desse contexto este artigo tem como objetivo analisar os processos cognitivos que estão em operação nos comentários publicados no Twitter no dia do lançamento dos episódios *Filmed Before a Live Studio Audience* e *Don't Touch That Dial* da série *WandaVision* (Disney+, 2021). Para a discussão desta questão, analisamos sob a ótica dos estudos Feuerstein *et al.* (2014) sobre a modificabilidade cognitiva estrutural os conteúdos compartilhados por oito perfis, dedicados ao

universo de *WandaVision*, gerenciados pelo *fandom* brasileiro. São eles: @NacaoMarvell, @MarvelPlusBR, @BRMarvelNews, @wandamcuBR, @feiticeiraescbr, @NewsWandaVision, @TheVisionBR e @MarvelsSeries.

2. O diálogo entre a complexidade narrativa e os processos cognitivos

Com base nas pesquisas de Flynn (2007) e Schooler (1999), Johnson (2012) pontua que a cultura popular, especificamente o cinema, a TV e os videogames têm exigido, de uma forma até então inédita, maior esforço cognitivo do público. Para o autor, ao estimularem a compreensão crítica dos telespectadores, através da multiplicidade de fios narrativos e das lacunas narrativas e intertextuais da trama, as séries televisivas propiciam a resolução de desafios cognitivos. Esse processo possibilita o desenvolvimento de habilidades como, por exemplo, o reconhecimento de padrões, a capacidade de sondar e telescopar, de mapear etc.

Para contextualizar a pesquisa de Johnson (2012) é importante ressaltar que autor parte um estudo realizado por Flynn no final dos anos 1970 que tinha como objetivo inicial refutar as afirmações de um artigo publicado no *Harvard Educational Review*³, em 1969. No trabalho, intitulado *How much can we boost I.Q. and scholastic achievement*, Jensen mostrava uma comparação de testes de quociente de inteligência (QI), indicando uma diferença de 15 pontos entre brancos e negros. Como pontua Berghe (2000, p. 274), “Jensen foi repetidamente atacado por declarar que os negros americanos eram de forma inata inferiores em certas habilidades intelectuais, e por volta de 80% das variações de desempenho em testes de QI se deviam à hereditariedade”.

Depois de buscar vários levantamentos geracionais referentes aos testes de QI realizados na população estadunidense Flynn constatou que, nos últimos 46 anos, o valor do quociente havia aumentado 13,8 pontos (Flynn, 1980; 2007). Isto é, independente de classe, raça ou acesso à educação, os sujeitos submetidos ao teste estavam ficando mais inteligentes. Weiss e Saklofske (2020) ressaltam a importância de se questionar os debates simplistas sobre genes *versus* ambiente, uma vez que os fatores não são ortogonais ou dicotômicos, mas complementares, como variáveis sobrepostas.

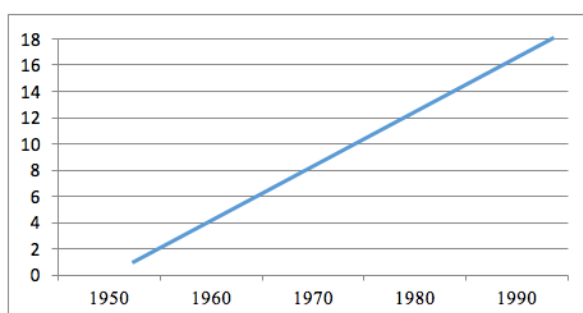


Figura 1. Publicado em 2007 por Flynn o gráfico mostra uma atualização do estudo realizado no fim dos anos 1970, indicando o aumento constante na média de acerto nos testes de QI. Fonte: Adaptado pelas autoras a partir de Flynn (2007).

É importante ressaltar que o teste de quociente de inteligência reflete apenas uma⁴ parte do espectro da inteligência humana, não representando o número total de conexões da rede cerebral (Eysenck; Keane; 2017). Como afirmam Fonseca (2015) e Feuerstein *et al.* (2014) o QI, principalmente no século XX, quando o teste se popularizou, era visto como uma medição fixa que, conseqüentemente, inviabilizava qualquer capacidade de mudança. Herrnsstein e Murray (1994) defendiam, por exemplo, que a inteligência era algo observado apenas nos seres humanos, em determinada quantidade e qualidade. Atualmente, sabe-se que a inteligência não pode ser quantificada em sua amplitude, limitando o ser humano. Nesse sentido, a inteligência é “[...] um agente ou um estado dinâmico energético que é instável e responsivo à necessidade da pessoa de se modificar para adaptar-se a situações e lidar com elas com sucesso” (Feuerstein *et al.*, 2014, p. 49).

Apesar de muitas discussões e questionamentos (Nettelbeck; Wilson, 2004; Wicherts *et al.*, 2004; Schelini *et al.* 2013), o Efeito Flynn nos ajuda na reflexão das variáveis que explicariam o aumento do nível intelectual ao longo dos anos. A primeira hipótese seria a nutrição, o consumo regular de vitaminas, minerais, cálcio, ferro e iodo interfeririam no desempenho do sujeito. Entretanto, os dados analisados por Flynn (1980; 2007) mostraram que mesmo os índices do período pós-guerra⁵ se mantiveram em ascensão. O mesmo se aplica à hipótese de que a melhoria da educação dos jovens estadunidenses geraria melhores resultados. Entretanto, ao aplicarem testes relacionados a disciplinas como, por exemplo, matemática e história, observa-se que o empenho vem caindo abruptamente (Johnson, 2012). Dessa forma, a hipótese mais aplicável na fundamentação de Flynn (1980; 2007) seria o ambiente. Como afirma Schooler (1998, p. 71)

“A complexidade do ambiente de um sujeito é definida pelas características de seus estímulos e demandas. Quanto mais amplos e diversos forem os estímulos, maior será a quantidade de decisões exigidas, maior será a quantidade de considerações a serem levadas em conta para essas decisões, e quanto mais elas parecerem contraditórias e ambíguas, maior será a complexidade do ambiente”⁶ (Tradução nossa).

Os pontos destacados por Schooler (1998) vão ao encontro das reflexões de Feuerstein *et al.* (2014) sobre a disparidade das demandas cognitivas entre o homem medieval e o contemporâneo. Segundo os autores estima-se que o sujeito contemporâneo é exposto, em apenas 24 horas, a mais estímulos do que um homem medieval durante toda a sua vida.

*“No passado, muitas crianças e adultos eram confrontados com decisões determinadas externamente, uma variedade limitada de escolhas e variáveis muito mais simples e diretas das quais tinham que escolher. Hoje uma pessoa tem que decidir por si em face de uma multidão de escolhas” (Feuerstein *et al.*, 2014, p. 26).*

Essas novas demandas, envolvendo a habilidade de escolha, o planejamento, a organização dos dados e a ordem de prioridades, entre outros processos, reforçam o caráter adaptável e alterável da cognição. Entretanto, durante muitos anos acreditava-se, principalmente nos campos da educação, da psicologia e da política social, que a cognição era algo que não poderia ser alterado. Cunhada pelo Feuerstein, a teoria da modificabilidade cognitiva estrutural ajudou a mudar este contexto (Feuerstein *et al.*, 2014). Para o autor os processos cognitivos não podem ser entendidos como algo irreversível, fixo e imutável, mas dinâmico e ininterrupto.

Ao contrário do cenário cognitivo, a capacidade de mudança do cérebro é restrita ao ser humano (Feuerstein *et al.*, 2014; Fonseca, 2018). Segundo Feuerstein *et al.* (2014) a modificabilidade seria a grande singularidade do indivíduo, pois ela se dá através da mediação.

“Apesar de haver indicadores de mediação também no mundo animal, eles não permitem que os animais transmitam suas experiências aos seus descendentes. Animais são limitados em sua habilidade de transmitir sua experiência porque lhes faltam ferramentas de transmissão” (Feuerstein et al. 2014, p. 53).

Como, por exemplo, a prova que temos da extinção de uma espécie é apenas o seu testemunho físico. Isto é, sabemos que os dinossauros foram extintos há 233 milhões de anos por conta de seus rastros e não porque eles nos disseram como foram extintos⁷. Desta forma, como explicam Feuerstein *et al.* (2014, p. 53), “Os seres humanos são os únicos que transmitem a cultura, e pela transmissão de cultura não dizemos apenas a transmissão de informação, mas a formulação da experiência para que as gerações futuras possam derivar delas os meios para se adaptar a mudanças”. A modificabilidade cognitiva estrutural está relacionada com a aquisição de habilidades que não estavam previamente presentes e/ou acessíveis no sujeito, ou seja, são mudanças na estrutura do pensamento.

Segundo a proposta de Johnson (2012), a complexidade ambiental envolveria não só esferas amplas, tais como a sociedade e a tecnologia, mas também a mídia. Para o autor, as narrativas ficcionais seriadas televisivas estariam contribuindo para desenvolvimento cognitivo do público. O autor destaca três pontos narrativos e estéticos que estariam relacionados ao exercício cognitivo do telespectador, são eles: a multiplicidade narrativa, a escassez de setas chamativas e a rede social de personagens.

A multiplicidade narrativa é caracterizada por uma gama de pontos de interesse e de identificação, as tramas são compostas por múltiplas camadas entrelaçadas e vários personagens (Nelson, 1997; Johnson, 2012). A segunda característica pontuada pelo autor é a escassez de setas chamativas (Johnson, 2012, p. 61-75). Definido como uma forma de cartaz narrativo que é “[...] disposto convenientemente para ajudar o público a entender o que está acontecendo. O recurso é um guia narrativo que enfatiza os detalhes relevantes e diminui o esforço analítico necessário para o entendimento de uma história” (Johnson, 2012, p. 61). Porém, o que se observa nas tramas da *Post-Network Era* é a ausência e/ou a diminuição desse recurso. Nesse sentido, cabe ao telespectador completar as lacunas informacionais e as intertextualidades criadas pelos roteiristas. Nesse contexto, Johnson (2012, p.61-75) afirma que a escassez de setas chamativas estimula o telespectador a completar informações e preencher lacunas interpretativas relacionadas tanto ao universo ficcional quanto a elementos externos, exercitando a atenção e o esforço analítico.

O último ponto ressaltado pelo autor é a complexidade das conexões entre os personagens (Johnson, 2012, p. 86-91). Ao assistir às tramas, os telespectadores constroem mentalmente mapas de redes sociais, isto é, densas teias sobre as relações, os parentescos, as afiliações e a personalidade dos personagens. Para compreender os episódios, o público precisa estruturar mentalmente não só as relações apresentadas pelos roteiristas, mas também o que Johnson (2012) classifica como relação fantasma. Isto é, “[...] uma ligação deliberadamente omitida na tela, mas que os espectadores

inevitavelmente consideram por conta própria” (Johnson, 2012, p. 90). Desse modo, para o autor (2012, p. 86-91) as séries contemporâneas estimulam a capacidade cognitiva do público de monitorar e lembrar de distintos níveis de interação social, ou seja, qual é a relação dos personagens, como as conexões são ampliadas e ressignificadas ao longo da trama, criando mentalmente modelos funcionais do mundo social.

A demanda cognitiva também pode ser observada nos personagens tridimensionais. Segundo Johnson (2012) e Martin (2014) as séries da *Post-Network Television* se distanciam da estrutura dual da moralidade clássica entre o bem e o mal. Neste sentido, observamos mudanças no desenvolvimento de *plots* e sub *plots*, e também no perfil dos personagens. As tramas deixam de apresentar uma clareza moral e a ordem passa a ser constantemente questionada (Johnson, 2012; Martin, 2014). De acordo com Johnson (2012), ao acompanhar uma história permeada por personagens ambíguos e procurarem padrões de comportamento que se desdobram de maneira, muitas vezes, ocultas, os telespectadores colocariam em prática sua inteligência social.

Apesar de não se pautar nos estudos de Feuerstein *et al.* (2014) a proposta teórica de Johnson (2012) de que as séries contemporâneas demandam maior esforço analítico e, conseqüentemente, estimulam o desenvolvimento cognitivo do público, apresenta um diálogo direto com o conceito de modificabilidade cognitiva estrutural. De acordo com Feuerstein *et al.* (2014, p. 25-31) os processos cognitivos, ou seja, aqueles que podem ser alterados ao longo da vida, abrangem diversas habilidades. Um dos pontos ressaltados pelos autores é a atenção, ou seja, decidir “[...] no que focar, quando focar e de quais formas focar” (Feuerstein *et al.*, 2014, p. 26). Ao serem construídas a partir de diversos fios narrativos que, além de se entrelaçarem de forma densa, também são deixados em aberto por meses ou até anos, as tramas contemporâneas estimulam o público a alternar sua atenção simultaneamente entre diversos estímulos. Ao dominar a habilidade cognitiva pontuada por Feuerstein *et al.* (2017), o telespectador conseguirá reconhecer alguns padrões que integram os arcos narrativos, tais como a temporalidade, a ambientação e o mapa social do universo ficcional e correlacioná-los, compreendendo os desdobramentos da atração. O mesmo pode ser observado na ausência de setas chamativas. O exercício cognitivo é fundamental para que o público identifique as camadas interpretativas da trama e perceba em qual momento é necessária a inserção de informações que vão além do paratexto.

Os autores também destacam que os processos cognitivos ajudam o sujeito a organizar e sequenciar grandes volumes de informação (Feuerstein *et al.*, 2014). Essa habilidade fica nítida se observamos as demandas cognitivas propiciadas não só pela multiplicidade narrativa, mas pelos amplos mapas de rede social de personagens. O público, para compreender a história, precisa reconhecer as nuances das relações e do próprio perfil dos personagens que vão se alterando ao longo do programa.

Outro processo cognitivo que vai ao encontro da argumentação de Johnson (2012) é a ressignificação de informações. Como pontuam Feuerstein *et al.* (2014, p.27), esta habilidade permite ao sujeito transformar “[...] os dados reunidos em estruturas mentais para serem reestruturadas e elaboradas posteriormente”. As tramas são construídas a partir de arcos em constante mutação e de

personagens moralmente complexos. Desta forma, o telespectador é constantemente estimulado a reconsiderar os acontecimentos da trama.

3. O universo ficcional de *WandaVision*

Criada por Jac Schaeffer, a série *WandaVision* (Disney+, 2021) é protagonizada pelos personagens da Marvel Comics Wanda Maximoff / Feiticeira Escarlate (Elizabeth Olsen) e Visão (Paul Bettany). Composta por nove episódios, a série foi distribuída mundialmente pelo serviço de *streaming* Disney+ entre 15 de janeiro de 2021 e 5 de março de 2021. A narrativa transmídia de *WandaVision* integra a quarta fase do Universo Cinematográfico da Marvel (UCM). Atualmente composto por cinco fases⁸ o UCM teve início em 2008 com o lançamento de *Homem de Ferro (Iron Man)* e abrange mais de 43⁹ tramas. *WandaVision* dá continuidade à expansão da Marvel no âmbito das narrativas ficcionais seriadas, iniciada em 2013 com a produção de *Marvel's Agents of S.H.I.E.L.D.* (2013-2020) na emissora estadunidense ABC. A história perpassa os eventos do longa metragem *Vingadores: Ultimato (Avengers: Endgame, 2019)* e antecipa os acontecimentos de *Doutor Estranho no Multiverso da Loucura (Doctor Strange in the Multiverse of Madness, 2022)*.

WandaVision tem como ponto de partida a mudança de Wanda Maximoff e Visão para a cidade de Westview, no estado de New Jersey, nos Estados Unidos. Porém, ao longo dos episódios o casal começa a suspeitar que as coisas não são o que parecem. O arco narrativo central da série se divide em duas fases. A primeira fase mostra o luto de Wanda, detalhando a forma como a personagem lidou com a morte de Visão e as principais consequências de sua instabilidade emocional. A segunda fase é focada no processo de autodescoberta de Wanda, em que a personagem amplia seus poderes com a ajuda da vilã Agatha Harkness (Kathryn Hahn), que acaba se tornando uma espécie de “professora” para Maximoff. Harkness apresenta a Wanda pontos centrais do cânone como, por exemplo, o conceito de Magia do Caos, o título de Feiticeira Escarlate e, especialmente, o *Darkhold*.

Os episódios *Filmed Before a Live Studio Audience* e *Don't Touch That Dial*, lançados no dia 15 de janeiro de 2021, introduzem ao público as regras fundamentais e os elementos recorrentes do universo ficcional. De acordo com Mittell (2015, p. 40) (tradução nossa) “[...] a principal função de um piloto de televisão é nos ensinar como assistir a série e, ao fazê-lo, estimular o público a continuar assistindo - assim, pilotos de sucesso são simultaneamente educacionais e inspiradores”¹⁰. O autor afirma que essas orientações funcionam como uma espécie de tutorial, indicando ao telespectador quais serão os pilares daquela história. Em *WandaVision* observamos, por exemplo, que a passagem cronológica da trama está relacionada com as Eras da Televisão. Os episódios não só fazem alusão a *sitcons* clássicas como *The Dick Van Dyke Show* (CBS, 1961-1966), *I Love Lucy* (CBS, 1951-1957) e *Bewitched* (ABC, 1964-1972), mas reproduzem os modos de produção e gravação das décadas de 1950 e 1960.

No Brasil, o *fandom* da Marvel e de *WandaVision* começou a se mobilizar meses antes da estreia da série. Os grupos no Facebook, os sites especializados e os perfis no Twitter compartilhavam informações sobre a série, divulgando fotos, trailers, vídeos dos bastidores e *spoilers*. Todo conteúdo era contextualizado pelos fãs, abrangendo desde os horários de lançamento dos episódios pelo

Disney+, convertidos para o fuso horário brasileiro, até a legendagem da participação dos atores Elizabeth Olsen e Paul Bettany em atrações da programação da TV estadunidense. Com a estreia de *WandaVision* as páginas, principalmente no Twitter, passaram também a repercutir e analisar sistematicamente os episódios.

4. Os processos cognitivos em operação no Twitter

A abordagem metodológica de monitoramento, coleta e apresentação dos dados adotada na investigação do *fandom* de *WandaVision* no Twitter dá continuidade aos projetos desenvolvidos no âmbito do *Observatório da Qualidade no Audiovisual*¹¹ e é composta por duas etapas¹² (Fragoso; Recuero; Amaral, 2011; Deller, 2011; Recuero; Bastos; Zago, 2015; Borges; Sigiliano, 2021). A primeira etapa foi realizada em janeiro de 2021 e consistiu na exploração sistemática dos perfis para a definição das páginas que seriam monitoradas. Para isso, inserimos na barra de busca do próprio Twitter, vinculada à sua API¹³, os termos (palavras-chave e *hashtags*) relacionados ao universo ficcional da série. Com base nos resultados¹⁴, os perfis foram selecionados a partir dos recursos de individualização e das camadas estruturais de informação (Recuero, 2009; Bruns; Moe, 2013). Desta forma, as páginas tinham que apresentar recursos estéticos e de conversação relacionados a série *WandaVision*. Na navegação sistemática observamos se as páginas eram compostas por pelo menos dois, dos quatro recursos de individualização (*avatar*, *capa*, *username* e *descrição*), relacionados à trama. O outro critério usado na seleção se refere às camadas estruturais de informação. Discutida por Bruns e Moe (2013) essa categorização estabelece diferentes níveis de conversação do Twitter, são eles *micro*¹⁵, *meso*¹⁶ e *macro*¹⁷. Nesse sentido, foram observados se os conteúdos, as menções e as indexações postadas pelos fãs faziam referência à atração. A partir dessa filtragem chegamos ao recorte de oito perfis: @NacaoMarvell, @MarvelPlusBR, @BRMarvelNews, @wandamcuBR, @feiticeiraesabr, @NewsWandaVision, @TheVisionBR e @MarvelsSeries.

A segunda etapa consistiu na codificação dos *tweets* extraídos durante o monitoramento. Ao todo foram coletadas 6.739 mil postagens, publicadas entre 15 janeiro de 2021 e 16 janeiro de 2021. Nesta fase, os *tweets* são identificados, descritos e categorizados, isto é, cada publicação é analisada de forma individual com o *software* Atlas.ti (Fragoso; Recuero; Amaral, 2011; Recuero; Bastos; Zago, 2015; Borges; Sigiliano, 2021). O objetivo é agrupar os dados de acordo com suas idiosincrasias, em busca de similaridades, dissimilaridades, padrões e peculiaridades (Borges; Sigiliano, 2021). Por conta do volume e da complexidade dos dados, a codificação é dividida em duas fases: *macrocodificação* e *microcodificação*. Inicialmente, na *macrocodificação* categorizamos as postagens a partir do tema central do comentário feito pelo público, já na *microcodificação* a categorização é norteada pelas especificidades destas postagens. Por exemplo, a *macrocodificação* “personagem” pode ser composta por três *microcodificações*, especificando quais personagens foram repercutidos pelo público. É importante ressaltar que as categorias da *macrocodificação* são excludentes, dessa forma o que delimita a categorização dos dados são as suas características mais latentes. Na *macrocodificação* dos *tweets* publicados pelos fãs de *WandaVision* foram levantadas 12 categorias e 28 na *microcodificação*. Entre os contextos identificados na *macrocodificação* estão, por exemplo, a

intertextualidade, a nostalgia e o universo Marvel. Já na microcodificação observamos contextos recorrentes tais como as telenovelas, as séries da década de 1950, os filmes *Vingadores: Era de Ultron* (2015), *Capitão América: Guerra Civil* (2016) e *Vingadores: Guerra Infinita* (2018).

Tabela 1. Sistematização do monitoramento. Fonte: Elaborada pelas autoras (2022)

Perfis Monitorados	Tweets Extraídos	Macrocodificação	Microcodificação
8	6.739 mil	12	28

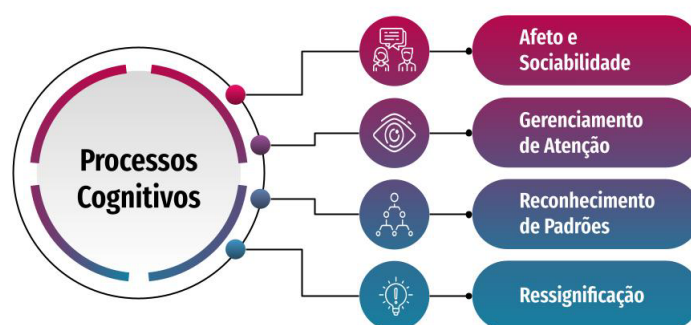


Figura 2: Processos cognitivos analisados com base nas discussões de Feuerstein et al. (2014).

Fonte: Elaborada pelas autoras (2022)

De acordo com Feuerstein et al. (2014) o compartilhamento das impressões do sujeito sobre um conteúdo aciona diversos processos cognitivos relacionados ao afeto e à sociabilidade. Neste sentido, ao repercutirem o universo ficcional de *WandaVision*, os fãs propiciam a formação de comunidades momentâneas no Twitter. Ou seja, a partir dos desdobramentos narrativos, os telespectadores interagentes¹⁸ compartilham suas impressões sobre os episódios reforçando, ampliando e/ou ressignificando um contexto conversacional em comum. Outro ponto importante é a adaptação que os perfis monitorados fazem dos conteúdos da série. Além de traduzirem reportagens e legendarem vídeos dos bastidores, as páginas organizam, a partir do fuso horário brasileiro, os horários de lançamento dos vídeos promocionais e dos episódios. A curadoria de conteúdos também foi observada nos *tweets* analisados, os telespectadores interagentes compartilhavam informações relevantes sobre *WandaVision*, tais como declaração de oficinas dos produtores e do elenco, e atualizavam os seguidores sobre as métricas da trama em sites especializados tais como *Rotten Tomatoes*.

O gerenciamento da atenção destacado por Feuerstein et al. (2014) está em operação nos *tweets* que abrangem a análise da composição imagética da série. As publicações referentes a esse processo cognitivo, em sua maioria, eram acompanhadas de capturas de tela que ressaltavam enquadramentos específicos das sequências, analisando desde *easter eggs* até pistas visuais para a compreensão do complexo universo ficcional de *WandaVision*. Além de destacarem as cenas, os perfis gerenciados pelos fãs também faziam correlações e projeções a partir de fotos promocionais divulgadas pelo Disney+ e de imagens dos bastidores, formando uma espécie de quebra-cabeça imagético sobre as

conexões e futuros acontecimentos da história. Alguns pontos da trama eram discutidos de maneira colaborativa no Twitter, não se limitando a um único perfil. Desse modo, cada interagente contribuía para o preenchimento das lacunas informativas da atração.



Figura 3. O perfil analisa a composição imagética de *WandaVision*. Fonte: Twitter (2021)

Ao estabelecerem correlações entre a trama de *WandaVision* e o amplo Universo Cinematográfico da Marvel (UCM) os fãs compartilhavam trechos das HQs e dos filmes, inserindo novas camadas interpretativas aos desdobramentos dos arcos narrativos. Dessa forma, mesmo que o público não tivesse acompanhado os *plots* de Wanda e Visão na narrativa transmídia da Marvel, ao acessar as páginas @NacaoMarvell, @MarvelPlusBR, @BRMarvelNews, @wandamcuBR, @feiticeiraescbr, @NewsWandaVision, @TheVisionBR e @MarvelsSeries teria a oportunidade de ler análises detalhadas e *threads* sobre a relação polissêmica entre os personagens e o MCU. Essa macrocodificação está relacionada ao processo cognitivo de organizar grandes volumes de informação, ou seja, a partir dos episódios de *WandaVision* os fãs estabeleciam conexões com o amplo universo da Marvel.



Figura 4. Os fãs correlacionam as seqüências da abertura de *WandaVision* com o Universo Cinematográfico da Marvel (UCM). Fonte: Twitter (2021)

Os conteúdos publicados pelo *fandom* também ressaltavam a habilidade de reconhecer padrões. Como pontuam Feuerstein *et al.* (2014), ao dominar o gerenciamento da atenção, o sujeito consegue identificar modelos recorrentes. Essa capacidade está em operação nos *tweets* sobre o paratexto, envolvendo especificamente o arco narrativo sobre a realidade paralela criada por Wanda. Deste modo, os fãs reforçavam pontos como, por exemplo, a estética das cenas em que a personagem alterava a realidade e a partir desses elementos explorava novas produções de sentido. Os *tweets* ironizavam tarefas e frustrações do cotidiano e como seria oportuno ter o poder de Wanda.

Por fim, o processo cognitivo de ressignificar uma informação pode ser observada nos memes criados pelos fãs de *WandaVision*. Além de explorarem o humor a partir de diversas referências do MCU, um ponto recorrente nos memes é o uso de figuras relacionadas ao cenário audiovisual nacional. Isto é, os *tweets* usavam imagens de personagens populares das telenovelas, acionando o afeto cultural do público brasileiro com o gênero.



Figura 5. Uma das ações de divulgação do Disney+ para o lançamento de *WandaVision* no Brasil foi protagonizada pela atriz de telenovelas Vera Fisher. Fonte: Twitter (2021)

Os personagens eram usados para estabelecer um paralelo entre a série e as tramas nacionais. Esse diálogo entre os formatos, aparentemente tão distintos, foi usado não só pelos fãs, mas pelo Disney+ para divulgar a série. Na ação de lançamento de *WandaVision* a plataforma convidou a atriz Vera Fisher para reproduzir uma das sequências da história. O conteúdo viralizou nas redes sociais, sendo compartilhado por interagentes que não estavam familiarizados com a trama da série, mas que se identificaram de algum modo com a estratégia de engajamento.

5. Considerações Finais

Este artigo integra os estudos sobre a complexidade narrativa e os processos cognitivos nas séries contemporâneas que vêm sendo desenvolvidos no âmbito do *Observatório da Qualidade no Audiovisual*¹⁹ (Universidade Federal de Juiz de Fora). Nesse sentido, é importante ressaltar que as

discussões apresentadas se configuram como uma proposta inicial de reflexão e se referem a um contexto pontual de investigação. Em outras palavras, as práticas da cultura de fãs abarcam diferentes modos de compreensão crítica e de produção criativa pautados por idiossincrasias tecnológicas, sociais e culturais. Desta forma, os processos cognitivos observados a partir das impressões compartilhadas por um grupo de fãs estão diretamente relacionados ao contexto específico em que estão inseridos. Para futuros trabalhos pretendemos ampliar o monitoramento, não se limitando apenas aos fãs. Após a estreia de *Wandavision* foram lançadas outras séries expandindo o universo da Marvel - *The Falcon and the Winter Soldier* (2021), *Loki* (2021), *What If...?* (2021), *Hawkeye* (2021), *Moon Knight* (2021), *Ms. Marvel* (2021) – nesse sentido, também pretendemos analisar os processos cognitivos em operação pelos distintos fandoms no Twitter.

A análise dos *tweets* publicados pelos fãs de *WandaVision* no lançamento dos episódios *Filmed Before a Live Studio Audience* e *Don't Touch That Dial* ressaltam as capacidades cognitivas dos telespectadores interagentes e nos dão pistas para futuros trabalhos. Além de reforçarem e aprofundarem os pontos do amplo universo ficcional da Marvel, os fãs brasileiros estabeleceram correlações entre as telenovelas e a série. Dessa forma, os *tweets* não só aproximam os formatos, mesmo que diferentes, mas introduzem novas camadas interpretativas sobre o cenário audiovisual no Brasil.

Portanto, ao abrangerem desde os desdobramentos narrativos da *WandaVision* e, conseqüentemente, seu diálogo com Universo Cinematográfico da Marvel (UCM), até a resignificação da trama em contextos distintos, a produção crítica e criativa dos fãs demanda processos cognitivos complexos. Perpassando pela permanência, no que se refere à retenção e à preservação das informações do universo ficcional e dos elementos recorrentes a complexidade narrativa, e pela transformação, em que o fã cria novas produções de sentido por meio de esforços independentes. Reconhecendo variados arranjos semânticos e camadas interpretativas e estabelecendo assim novos *insights* cognitivos.

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¹ É importante ressaltar que a abordagem sobre a cognição e os processos mentais discutidos neste trabalho se distanciam dos pressupostos da filosofia cartesiana pautados na dicotomia entre corpo e mente, sentimento e razão (Coelho; Broens, 2015; Eysenck; Keane, 2017; Régis, 2020). Deste modo, a cognição envolve habilidades lógicas, racionais, sensório-motoras, perceptivas, emocionais e culturais. Isto é, as capacidades de pensar, raciocinar, tomar decisões e elaborar estratégias são indissociáveis dos fatores motivacionais, biológicos, materiais e afetivos.

² A televisão comercial estadunidense é composta por três fases, são elas: *Network Era*, *Multi-Channel Transition* e *Post-Network Era* (LOTZ, 2007). A *Post-Network Era*, que tem início nos anos 1990 e se entende até hoje, é norteada por novos modos de criação, produção e distribuição das narrativas ficcionais seriadas.

³ Disponível em: <<https://files.eric.ed.gov/fulltext/ED023722.pdf>>. Acesso em: 23 abr. 2022.

⁴ Relacionadas à solução de problemas, ao raciocínio abstrato, ao reconhecimento de padrões e a lógica espacial (Flynn, 2007).

⁵ Refere-se à Segunda Guerra Mundial, entre 1939 e 1945.

⁶ The complexity of an individual's environment is defined by its stimulus and demand characteristics. The more diverse the stimuli, the greater the number of decisions required, the greater the number of considerations to be taken into account in making these decisions, and the more ill-defined and apparently contradictory the contingencies, the more complex the environment.

⁷ Entretanto é importante ressaltar que alguns estudos afirmam que outras espécies também têm a capacidade de transmitir cultura, não se limitando ao humano (Dawkins, 2000; Krützen et al. 2005; Edelman; Seth, 2009). Como, por exemplo, os golfinhos conseguem transmitir o difundir o comportamento, de geração para geração, por meio do aprendizado. As baleias jubartes adotam um modo complexo de canto para se comunicarem e esse canto pode ser aprendido pelas outras baleias jubartes.

⁸ Disponível em: <https://universocinematograficomarvel.fandom.com/pt-br/wiki/Fase_Cinco>. Acesso em: 23 abr.2022.

⁹ Considerando as etapas da pré-produção, produção e distribuição.

¹⁰ “[...] the chief function of a television pilot is to teach us how to watch the series and, in doing so, to make us want to keep watching — thus successful pilots are simultaneously educational and inspirational.”

¹¹ Disponível em: <<https://observatoriodoaudiovisual.com.br/>>. Acesso em: 16 jul. 2022.

¹² Ambas realizadas pelas autoras deste trabalho.

¹³ Application Programming Interface

¹⁴ Nesta etapa foram identificados 64 perfis.

¹⁵ O nível micro dialoga com que a comunicação interpessoal do interagente, ou seja, as menções que ele faz no Twitter, os usuários que ele troca mensagens, etc. (Bruns; Moe, 2013)

¹⁶ O nível meso se refere à rede de seguidores do interagente e todos os desdobramentos conversacionais que envolvem esta questão (Bruns; Moe, 2013)

¹⁷ O nível macro é focado na indexação do Twitter, isto é, as *hashtags* usadas pelos interagentes e as comunidades momentâneas que são formadas em torno das mesmas (Bruns; Moe, 2013)

¹⁸ Conforme pontuado em trabalhos anteriores, adotamos o termo telespectador interagente para designar o público que repercute (compartilha, produz conteúdo, responde a enquetes, comenta etc.) os conteúdos televisivos e/ou das plataformas de streaming nas redes sociais (Sigiliano; Borges, 2021).

¹⁹ Disponível: <<https://observatoriodoaudiovisual.com.br/>>. Acesso em: 23 abr.2022.

Facebook's Dark Pattern Design, Public Relations and Internal Work Culture

Pekka Kallioniemi
Tampere University, Finland,
pekka.kallioniemi@tuni.fi
0000-0001-5469-6224

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Abstract

Facebook inc. (now Meta Platforms) has been a target of several accusations regarding privacy issues, dark pattern design, spreading of disinformation and polarizing its users. Based on several leaked documents, the company's public relations have often contradicted with its internal discussions and research. This study examines these issues by analyzing the leaked documents and published news articles. It outlines the dark patterns that the company has applied to their platform's functionality, and discusses how they promote toxic behavior, hate speech and disinformation to flourish on the platform. The study also discusses some of the discrepancies between Facebook inc.'s public relations and internal work culture and discussions.

Keywords: *Social Media, Dark Pattern Design, Hate Speech, Disinformation*

1. Introduction

With almost 2.9 billion active users, Facebook (the platform) is the largest social media in the world. In 2020, people spent 38 minutes per day on the platform on average. The average time has been declining for years now, but it is still evident that Facebook is an integral part of many people's lives. People use it to stay in contact with their family, friends, and colleagues, and also share their life events, ideas, and values with other people. But the platform has also been criticized for various things, including aggressive collection of personal data, publishing and spreading of fake news (Rai, 2021), incitement of violence (Miles, 2018), and even war crimes (Mackintosh, 2021).

Facebook inc. (now Meta Platforms) has been in the eye of the storm since, Frances Haugen, one of its employees' disclosed tens of thousands of company-related internal documents to the Securities and Exchange Commission and The Wall Street Journal in September 2021. The documents showed that Facebook has had trouble dealing with growth, disinformation, and moderation. The New York Times declared in "As Facebook grew, so did the hate speech, bullying and other toxic content on the platform." (Frenkel et al., 2018) Researchers, journalists and activists have stated that the platform has been used as a propaganda instrument in countries such as Myanmar, Afghanistan and Ethiopia (Frenkel et al., 2018; Mackintosh, 2021; Scott, 2021). Some of the problems have been identified by Facebook inc.'s internal research teams, but many of these warnings have been ignored by the company's executives.

In recent years, many platform designers have come forward about some of the design choices regarding user engagement. One designer admitted that the systems they have worked on cause

addiction by design and exploit negative “triggers” (P. Lewis, 2017). Ex-Google design ethicist Tristan Harris has explained that Facebook triggers our base impulses with clever user interface design such as notifications and “Like” buttons (Bosker, 2016). Confessions made by the designers is also supported by the research done on the topic – social media is a platform where negative content is distributed farther and faster (Vosoughi et al., 2018). Algorithms that are built on incentive structures and social cues amplify the anger of users on social media platforms (Fisher & Taub, 2018). These “design tricks” are referred to as *dark pattern designs* – design choices that modify the design space or manipulate the information flow. These design choices deliberately “trick” users to make things they did not intend to do.

This paper explores two research questions:

RQ1: What type of dark pattern designs Facebook inc. has applied to their site’s recommendation algorithm and News Feed?

RQ2: How does Facebook’s public relations (PR) contradict with their internal work culture and user interface design?

The importance of this research stems from the fact that Facebook inc.’s social media platforms Facebook and Instagram have already become an integral part of our everyday life. Instagram has 1.4 billion monthly users, whereas in case of Facebook this number is as high as 2.9 billion. In addition to people discussing day-to-day topics, they are also used by companies of all sizes for communication, advertising and informing of (potential) clientele.

The design of platforms and software shapes and affects our behavior in digital spaces (Munn, 2020). This research adopts a design-centric approach, and the initial hypothesis is that many of the design choices made by Facebook inc. and introduced in this study are deliberate and prioritize user engagement over safety. Many of these choices are also in conflict with Facebook inc.’s mission statement and core values. Yet, as the leaked documents show, these adjustments were accepted by the company executives and done knowingly and willingly.

This work supplements the work that has already been done in both dark pattern design and on the effects of active use of social media platforms on both individual and societal level. In most examples and references to Facebook inc., this study references to documents leaked by the whistleblower Frances Haugen. As the Facebook Files (also referred to as Facebook Papers) have not been made available for academics, this work often references to news articles regarding the topic. At the time of the writing, Gizmodo is working together with several universities to make the files public (Dell et al., 2021).

2. Related work

Dark patterns

The term “dark patterns” was first introduced by Harry Brignull on the website darkpatterns.org (Brignull, 2018). He defined it as “tricks used in website and apps that make you do things that you

didn't mean to, like buying or signing up for something." After this the phenomenon was also targeted by academia, who have tried to come up with an official definition ever since. For example, Brignull (Brignull, 2018) and Waldman (Waldman, 2020) called them design "tricks", whereas Bösch (Bösch et al., 2016) referred them as "misleading" interfaces. What comes to the interface designer, Gray et al. (Gray et al., 2020) said that with dark patterns, the designer abuses their domain-specific knowledge of human behavior. Already back in 1998, Fogg defined a similar concept with "persuasive technologies", where the designer could intentionally influence users. (Fogg, 1998) A common problem in the literature regarding dark patterns is the lack of specificity. For example, what constitutes a trick? What makes user interfaces misleading?

Dark patterns have been used and studied in multiple domains, including in video games (Zagal et al., 2013), mobile apps (C. Lewis, 2014), and even in home robotics systems and their "cuteness" (Lacey & Caudwell, 2019). Dark patterns have also been studied in the context of user privacy. For example, Bösch et al. (Bösch et al., 2016) introduced a pattern called Bad Defaults, where "the default options are sometimes chosen badly in the sense that they ease or encourage the sharing of personal information." A Norwegian watchdog group blamed Facebook and Google for using dark patterns that pushed the users toward less privacy (Forbrukerrådet, 2018). After the introduction of GDPR, cookie banner notices become ubiquitous in the web. Utz et al. (Utz et al., 2019) studied a random sample of these banners, and found that over half of them contained at least one dark pattern, including privacy-unfriendly default choices, hidden opt-out choices and preselected checkboxes for allowance of data collection.

Mathur et al. (Mathur et al., 2019, 2021) have suggested a set of shared higher-level attributes as an attempt to organize the dark pattern literature. These attributes are listed in Table 1, and more extensive descriptions can be found in Mathur et al. (Mathur et al., 2021). Asymmetric, covert, or restrictive patterns, or those that involve disparate treatment, modify the set choices available to users, thus attempting to influence their decisions. Deceptive and information hiding patterns influence user's decisions by manipulating the information that is available or visible to them.

Table 1. Higher-level dark pattern attributes grouped based on how they modify the user's choice architecture. (Mathur et al., 2021)

Choice architecture	Attribute	Description
Modifying the design space	Asymmetric	Unequal burdens on choices available to the user
	Restrictive	Eliminate certain choices that should be available to users
	Disparate Treatment	Disadvantage and treat one group of users differently from another
	Covert	Hiding the influence mechanism from users
Manipulating the information flow	Deceptive	Induce false beliefs in users either through affirmative misstatements, misleading statements, or omissions
	Information Hiding	Obscure or delay the presentation of necessary information to users

The grouping by Mathur et al. and other research on dark patterns has missed, is the attribute where the user is manipulated for further engagement with the platform. Overall engagement is one of the most important metrics when evaluating a success of a platform, and several dark pattern techniques have been applied to increase it. These design choices are often done by manipulating the information flow, and they attempt to increase the total engagement by appealing to basic human emotions such as happiness, disgust, and anger. The reason why dark patterns are so effective because they make a user's behavior and actions feel organic and appear like an exercise of their free will.

Facebook, News Feed and engagement

In the case of Facebook, this manipulation of information flow is often evident in the *News Feed*. In the early days of Facebook, the site was billed as an “online directory” of sorts – each user would have their own page with information about their education, hobbies, relationships, etc. The first version of the Feed was implemented in 2007. This Feed view showed mostly status updates by your contacts and not much else. In 2011 Facebook released the Timeline that moved away from directory structure and into more dynamic way of presenting information (Albanesius, 2014). At some point the official name of the Feed was changed to News Feed, and it became the central part of the platform. It became the first thing that the users saw when they entered the website or used the Facebook mobile app. Farhad Manjoo, a New York Times journalist, stated that for many users, “Facebook is the Feed and the Feed is Facebook”. The main function of the feed is to gather information from various pages and profiles automatically and show this information to its users. This algorithm provided the users with information that would be otherwise too overwhelming to find and at the same time created a convenient and personalized News Feed for each individual user.

What also changed, was that Facebook no longer presented information chronologically, and since 2009 Facebook has used algorithms to organize and decide what is shown to the user and what is not (see Figure 1). This change was explained by an analyst Benedict Evans: “If you have 1500 or 3000 items a day, then the chronological feed is actually just the items you can be bothered to scroll through before giving up.” (Evans, 2018) But for Facebook inc., there was also another reason for this shift: engagement. Now the algorithm was prioritizing content with higher engagement score, thus attempting to engage the user for longer periods of time.

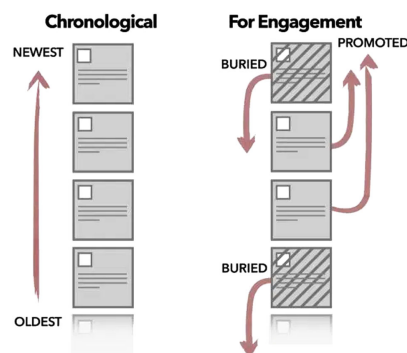


Figure 1. Facebook has replaced chronological ordering of content to an algorithm-based, dynamic model that focuses on engaging its users (Rose-Stockwell, 2018).

Even though the change may have increased the total engagement, it also brought all kinds of problems. The researchers at Facebook found out in 2018 that the algorithm was feeding the users with divisive content that provoked strong reactions to gain the user's attention and increase their time spent on the platform. (Horwitz & Seetharaman, 2020) This research was shelved by the Facebook inc. executives. This is only one example of how Facebook inc.'s own internal research and executive-level decision-making have been in conflict. More of these examples are introduced in the later chapters.

For the recommendation algorithm to work, it needs some type of information about the user. Previous research and reports have shown that Facebook collects vast amounts of data from its users, both while using the platform and outside of it (Singer, 2018). But it also tracks and analyzes how the user interacts with the content from the News Feed. In 2009, Facebook inc. added the iconic "Like" button on their platform. This was a new way for users to interact with status updates, comments, photos and basically all type of content found on the site. These "likes" could then be shown on the News Feed of your Facebook friends and contacts, enabling people to share their preferences with others.

Additional reaction emojis, "Love", "Haha", "Wow", "Sad", and "Angry", were added in 2016. Facebook's algorithm was then programmed to use these emoji as parameters and signals to push emotion-heavy content to the users. These new emoji were five times more "valuable" than regular "Likes". (Merrill & Oremus, 2021) The rationale behind this was that content that prompted strong reactions kept users more engaged on the platform. This change led to many unexpected consequences, which will be discussed in the later chapters. In addition to the weighting based on people's reactions, Facebook has more than 10 000 signals that are used by the algorithm to determine if a content can engage the user. As the News Feed is the core element of the platform, the company has not revealed any information about these signals. (Merrill & Oremus, 2021) This information has so far been only obtained from the leaked internal documents.

Our research argues that in Facebook's case, dark pattern design increases the overall user engagement (and thus profitability) at the cost of user safety. Next, we discuss the ideas of hate speech, polarization and information bubbles that are closely related to this phenomenon.

Hate Speech, polarization, and information bubbles

As the data online has increased dramatically, also the amount of hate speech online is on the rise (Pacheco & Melhuish, 2020). Detection and removal of online hate speech can be broadly divided into two approaches: a technical, algorithm-based, and non-technical, human-based. The first one attempts to tackle this problem by developing models and algorithms that can identify and remove any content that is considered problematic. Large sums of money have been invested in training these models to be efficient, and for example Facebook inc. has spent 13 billion dollars on "safety and security" on their platform. (Mackintosh, 2021) These models have also been a topic of research in academia (e.g. Vidgen & Derczynski, 2020; Corazza et al., 2020; Salminen et al., 2020). This process is often iterative and iterations are commonly based on various large data sets (Vidgen & Derczynski,

2020). This arms race between the toxic communicators and self-teaching algorithms is still ongoing, but at the moment it seems that the virulent humans have an upper hand. It is commonly understood that the lack of understanding of basic human emotions makes it difficult for algorithms to detect and remove hate speech efficiently, and machines have hard time understanding for example racial histories and power dynamics (Kallioniemi, 2021).

The second approach involves the use of humans as content moderators, and it emphasizes that the problem is only solvable by other humans. The defenders of human curation and moderation claim that algorithms will always have trouble in identifying the different contexts and complexities of human language (let alone multiple languages). But this approach has its problems, too. One of them is bias – for example on Reddit, users are heavily focused on sources that reflect their own political leanings (Soliman et al., 2019). Second problem is related to the heavy toll this type of work can have on one's mental health. Reviewing content that potentially contains hate speech, vitriol and/or graphic images will most probably be harmful long-term, especially when this type of reviews are conducted on day-to-day basis. In addition to the harmful content, the reviewers are also often under pressure because of demanding performance targets and deadlines (Newton, 2019).

Recent U.N. report stressed that “Online hate is no less harmful because it is online” and that “with the speed and reach of its dissemination, can incite grave offline harm and nearly always aims to silence others” (Kaye, 2019). Munn (2019) has speculated that social media platforms form a kind of pipeline for radicalization with the content that they offer. These types of content often aim to invoke strong emotional reactions and have a strong moral charge. By commenting on a controversial topic, they aim to establish two opposed camps, thus leading to polarization of populations.

Emotionally charged imagery and headlines capture the user's focus, and emotional reactions like anger are extremely good at engaging them. Munn (2020) has theorized that sharing this content may be a way to offload these emotions by removing their burden on the individual level. Social media platforms enable the sharing of content with only a few clicks, and these sharing chains often result to what Rose-Stockwell calls “outrage cascades” or “viral explosions of moral judgment and disgust” (Rose-Stockwell, 2018). Crockett concluded the phenomenon as follows: “When outrage expression moves online it becomes more readily available, requires less effort, and is reinforced on a schedule that maximizes the likelihood of future outrage expression in ways that might divorce the feeling of outrage from its behavioral expression.” (Crockett, 2017)

3. Methodology

This study adopts a design-centric approach, and it seeks to understand and find a connection between Facebook's engagement-driven design choices and their consequences in form of prioritizing toxic content, including hate speech, disinformation, and fake news. Design choices, especially on prominent and popular platforms shape our behavior in digital space, and these platforms are thoroughly planned, evaluated, and developed with particular intentions in mind. Thus, a platform can be considered as a set of “core design problems” (Tura et al., 2018, Table 1). This method examines

Facebook's interface design and design choices, and this is done by examining the official internal documents also known as the "Facebook Papers".

Frances Haugen, an ex-employee of Facebook leaked these documents to the United States congress, and the redacted versions were then reviewed by a consortium of news organizations. The Facebook Papers consisted of presentations, research papers, internal discussions and strategy memos and presented a view into how Facebook executives make decisions for the company. The news organizations that initially reported on the issue were *The Wall Street Journal*, *Protocol*, *The New York Times*, *The Washington Post*, *POLITICO*, *NBC News*, *CNBC*, *CNN*, *The Verge*, *Gizmodo*, *Wired*, *Associated Press*, *NPR*, *The Financial Times*, *Bloomberg*, *The Atlantic* and *The Reuters*. In the first phase, all Facebook Papers related material published by these organizations were read and analyzed. In the second phase, other prominent and related articles coming up with a Google search for "Facebook Papers" were read and analyzed. From this analysis we could organize a summary of the leaks.

This summary was then further analyzed through the context of dark pattern design. A scoping review of the dark pattern design academic literature was conducted by compiling a dataset of papers by searching the ACM Digital Library, arXiv, and Google Scholar for academic work that referenced terms "dark patterns", "dark pattern design", "anti-pattern(s)", "deceptive design pattern(s)", "FoMo design(s)", "manipulative design" and "manipulative design pattern(s)". These keywords were considered to be a representative dataset of related work on the topic. These papers were then filtered, retaining work that discusses dark pattern design in the context of user design, and have been published in an academic journal.

Results

In this chapter we analyze different examples design choices on Facebook, and how they have affected the users of the platform but also the internal work culture at Facebook inc. Many of these examples refer to the documents leaked by Frances Haugen.

Polarizing content and Facebook's News Feed

In 2018, Facebook inc. changed its algorithms deciding what content is prioritized on Facebook's News Feed. Their goal was to prioritize "meaningful social interactions" (MSI for short) between friends and family. The idea behind MSI was to assign values to "likes", comments on posts, reshares and other interactions on the platform. The algorithm change was executed after rigorous planning – the company ran surveys on more than 69 000 participants in five different countries, asking them about their preferred content on the platform. These findings were then used for "fine tuning" the recommendation algorithm.

In November 2018 an internal research document titled "Does Facebook reward outrage? Posts that generate negative comments get more clicks" concluded that the number of negative comments on a link resulted in more clicks on said it. The document stated that "Ethical issues aside, empirically, the current set of financial incentives our algorithms create does not appear to be aligned with our mission." (Metz, 2021) The change in recommendation algorithm affected publishers, political parties,

and individual users alike. For example, in Poland one political party's social media team made an estimate that MSI resulted in 80% of negative comments on each post. In Spain, many political parties were worried how this change would affect democracy in long-term. There were also personal anecdotes on how this switch to negativity has affected people's friends and family (Metz, 2021).

Facebook vice president of engineering, Lars Backstrom, defended their algorithm by saying that "like any optimization, there's going to be some ways that it gets exploited or taken advantage of. That's why we have an integrity team that is trying to track those down and figure out how to mitigate them as efficiently as possible." (Keach & Horwitz, 2021) Facebook inc.'s integrity team suggested several changes to the recommendation algorithm that could potentially reduce the rewarding of outrage and lies, but many of them were resisted by Mark Zuckerberg because they might decrease the overall engagement on the platform.

Hate speech and disinformation on Facebook

Based on the Facebook Papers, the company has real trouble in moderating hate speech and harmful content. Facebook cut the number of human curators focusing on filtering out hate speech on the platform (Seetharaman, Deepa Horwitz & Scheck, 2021). The company then decided to use AI and algorithms to identify and censor this type of content, but this turned out to be less than ideal solution. The AI struggled to identify content such as first-person shooting videos and racist rants. It even had trouble in identifying a difference between cockfights and car crashes. The documents revealed the frustration of Facebook's engineers, and one senior worker claimed that "The problem is that we do not and possibly never will have a model that captures even a majority of integrity harms, particularly in sensitive areas." (Seetharaman, Deepa Horwitz & Scheck, 2021). Another Facebook team concluded that the company's algorithms managed to remove 3 to 5 percent of hate speech from the platform, and 0.6 percent of content that violated the company's own policies against violence and incitement. In 2020, Facebook's chief technology officer claimed that Facebook's AI successfully detects 97 % of the hate speech that is on the platform. (Schroepfer, 2021)

Facebook's VP of Integrity, Guy Rosen has stated that instead of content removal, the more important factor is prevalence. He stated in an interview that "Prevalence is the most important metric, and it represents not what we caught, but what we missed, and what people saw." (Frontline, 2018) This was also emphasized in a blog post by Rosen (Rosen, 2021). There were two recent examples where these statements were not evident: First example comes from Facebook's internal research conducted in India. In February 2019, the company set up a test account to test how their recommendation algorithm's function and what type of content do they offer to the users (Rai, 2021). This test user followed only pages or groups recommended by the Facebook algorithm or that were encountered through those recommendations. In just three weeks, the test profile's feed was filled with graphic, violent imagery, and fake news. In the internal report, one of the employees wrote that "I've seen more images of dead people in the past 3 weeks than I've seen in my entire life total." (Rai, 2021)

The second example comes from Instagram, another platform of Facebook inc. In order to examine how Instagram can potentially affect the mental health of teenagers, U.S. Senator Richard Blumenthal together with people from his office set up a fake Instagram profile to pose as a 13-year-old girl. They used this account to follow some easily findable accounts that were associated with extreme dieting and eating disorders. "Within a day its recommendations were exclusively filled with accounts that promotes self-injury and eating disorders. That is the perfect storm that Instagram has fostered and created.", said Blumenthal in a senate hearing. (US Senate, 2021) As one data scientist at Facebook stated about removing hate speech: "We might just be the very best in the world at it, but the best in the world isn't good enough to find a fraction of it." (Seetharaman, Deepa Horwitz & Scheck, 2021) Facebook inc. has also used a whitelist that renders people immune from censorship algorithms. This list mostly consists of high-profile people, including celebrities, politicians, and journalists. One employee stated in an internal review that "Unlike the rest of our community, these people can violate our standards without any consequences." (Horwitz, 2021)

Facebook has also had trouble with fake profiles. The number of fake profiles that have been removed from the platform are currently in billions (e.g. Reuters, 2021; Palmer, 2019). In addition to users, Facebook also has a huge problem with disinformation and misinformation – MIT Technology Review concluded that as of 2019, many popular Facebook pages were moderated from Kosovo and Macedonia, known "bad actors" in the 2016 US election. These so called "troll farms" reached 140 million Facebook users from US monthly and 360 million users globally per week. These included the largest Christian American page and largest African American page on Facebook. In October 2019, 15 out of 15 of the biggest Christian American Facebook pages were being run by troll farms. Based on the report, Facebook inc. has conducted several studies that disinformation and misinformation and increase in user engagement are closely related, but the company is still prioritizing this type of content in the user's News Feed. (Hao, 2021b)

As the documents show, Facebook and their algorithms also has difficulties in filtering out hate speech and disinformation in non-English speaking countries, and especially in developing countries. This issue will be discussed in the following chapter.

Facebook in developing countries

Facebook inc. has faced many problems in developing countries, mainly due to lack of both employees and the lack of training data for algorithms. For example, Facebook's algorithms struggle with basic Arabic language, and has tremendous trouble with various Arabic dialects. (Seetharaman, Deepa Horwitz & Scheck, 2021) One of the company's engineers claimed that "As it stands, they have barely enough content to train and maintain the Arabic classifier currently—let alone breakdowns". (Seetharaman, Deepa Horwitz & Scheck, 2021) In Afghanistan, Facebook inc. took action against 0.23% of the hate speech posts, mainly due to incomplete list of slurs spoken in Afghanistan.

A similar incident was evident during the regional elections in Assam, India. Assam has a large problem with violence against Muslims and other ethnic groups, and these actions are often incited on Facebook. Yet, Facebook inc. did not have an Assamese hate-speech classifiers, and out of the 22

official languages in India, only four are covered by the company's algorithms. (Perrigo, 2019) Around 25% of India's population does not speak at least one of these languages (or English) at all. This problem is augmented by the fact that India is one of Facebook's fastest growing and most important overseas market (Rai, 2021).

In 2019 Facebook inc. set up an Indian test account to see how their own algorithms work on this important market segment. In 46-page research note one of the staffers involved with the test wrote that "I've seen more images of dead people in the past 3 weeks than I've seen in my entire life total". The test was designed to focus solely on the recommendation algorithm and the News Feed, and in just three weeks the Feed was filled with anti-Pakistan hate speech, images of beheadings, nationalist messages, and fake and doctored photos. Again, the reason for this grim result lies in the lack of classifiers and training data. Most of the money Facebook inc. spends on moderation is focused on English-language content, even though the company's largest growth comes from countries like India and Brazil. (Rai, 2021)

Internal documents also show that Facebook inc. struggled with civil war ridden Ethiopia (see Figure 2). Their internal ranking system ranked the country at the highest priority tier for countries that are in risk of conflict, but that the company did not have sufficient resources to curb the Ethiopia-related hate speech on Facebook (Mackintosh, 2021). The platform was actively used by militia groups such as the Fano for calls of violence against ethnic minorities. A leaked document showed that Facebook had difficulties in building algorithms to detect misinformation, disinformation and hate speech in Oromo or Amharic, which are the two most spoken languages in Ethiopia.

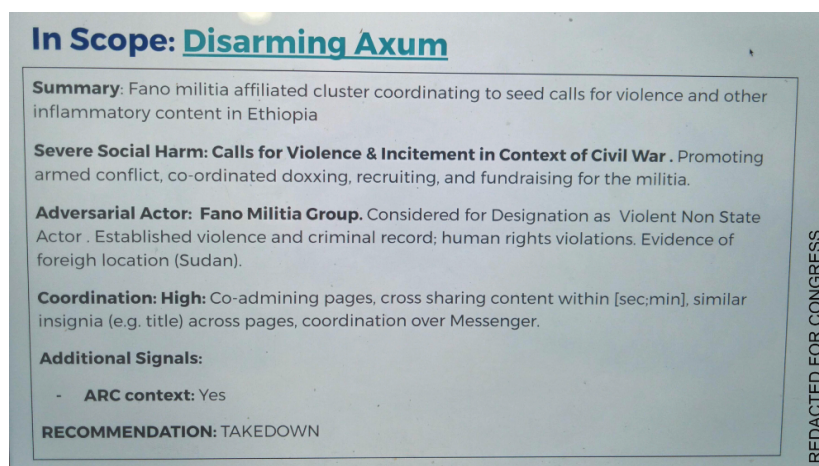


Figure 2. Internal Facebook document leaked by Frances Haugen (Mackintosh, 2021).

But before all this, Facebook inc. was accused of being complicit on the persecution of Rohingya Muslims in Myanmar during 2016 and 2017. Today, Myanmar stands accused at the International Court of Justice (ICJ) for committing a genocide on the Rohingya (Justice, 2021). Facebook inc. was requested for "documents and communications from Myanmar military officials" and other information that was taken down but conserved by the social media giant. Facebook inc. rejected this request, claiming that it was "extraordinarily broad" and that it would "special and unbounded access" to private accounts (McPherson, 2020). This was in direct conflict with the company's Human Rights

Impact Assessment, where they stated that the company should “preserve and share data where it can be used to evaluate international human rights violations, and that the company publish data specific to Myanmar so that the local and international community can evaluate progress more effectively.” (Choudhury, 2020)

Facebook uses hate speech detection algorithms for 40 languages worldwide. In the rest of the world, Facebook relies on user reports and human moderators to police and remove hate speech. Human moderators do not regularly scan the site for harmful and restricted content but make the final decision if the reported content should be removed. Avaaz, a global advocacy group, reported that with clearest examples of Assamese hate speech on Facebook, the removal took anything from hours up to three months. Some of this hate speech remained on the platform. (Perrigo, 2019)

Choudhury (Choudhury, 2020) has speculated that Facebook inc. sides with oppressing regimes and governments to protect their business interests in these domestic markets which they dominate by a wide margin. For example, for many people in Myanmar, Facebook is the internet. Any kind of bans could bring in state regulations that would then affect the company’s profits. These policies could also affect the opinion of the general public.

4. Discussion

RQ1: What type of dark pattern designs Facebook inc. has applied to their site’s functionalities and what are their implications?

The Facebook Papers showed that Facebook has had trouble dealing with growth, disinformation, and moderation. Facebook has replaced many of its employees and curators with algorithms that filter content based on pre-defined identifiers. Based on their internal documents, these algorithms do not work as intended, and large numbers of hate speech prevails on the platform. Developing and changing algorithms on a scale as big as Facebook can have drastic consequences on individuals and even on countries. These consequences can become even more dramatic if there are no skilled human factors involved – this was evident in countries like Afghanistan, Ethiopia, and India (Frenkel et al., 2018; Mackintosh, 2021; Perrigo, 2019). Based on Kallioniemi (2021), algorithms have real challenges in understanding basic human emotions such as happiness, anger and sadness. Yet on Facebook the promotion of engaging content is almost solely based on these factors and shocking, controversial, and emotion-evoking content often rises to the top. Algorithm changes such as MSI have been criticized inside the company, too, yet the focus of the recommendation algorithm is still mostly on maintaining and increasing user engagement. A lot of the criticism has also been written off as an “optimization issue”. The problem with this type of thinking is that this optimization is happening on a live site with billions of users, and a lot of the information sharing is done by fake users and pages (Hao, 2021b; Palmer, 2019).

Mathur et al. (Mathur et al., 2021) suggested a collection of higher-level dark pattern attributes, and we suggest a new sub-attribute to this collection (Table 2). *Information Promotion* refers to the promotion of engaging content regardless of the validity or safety of the information it contains. This

attribute is evident in Facebook’s recommendation algorithm, and it is driving the user engagement on the platform.

Table 2. Higher-level dark pattern attributes grouped based on how they modify the user’s choice architecture, with the added category of Information Promotion. (Mathur et al., 2021)

Choice architecture	Attribute	Description
Modifying the design space	Asymmetric	Unequal burdens on choices available to the user
	Restrictive	Eliminate certain choices that should be available to users
	Disparate Treatment	Disadvantage and treat one group of users differently from another
	Covert	Hiding the influence mechanism from users
Manipulating the information flow	Deceptive	Induce false beliefs in users either through affirmative misstatements, misleading statements, or omissions
	Information Hiding	Obscure or delay the presentation of necessary information to users
	Information Promotion	Promoting engaging content regardless of the validity or safety of the information

To summarize, these are the following dark patterns that are used by Facebook Inc.:

- Applying algorithms that prioritize user engagement over safety.
- Using illiterate algorithms (instead of trained personnel) for filtering, promoting, and censoring of content in developing countries.

RQ2: How does Facebook’s public relations (PR) contradict with their internal work culture and user interface design?

Many of the leaked documents show that Facebook inc. employees have repeatedly sounded the alarm on the company’s failure to act on important matters such as issues with the recommendation algorithm (Merrill & Oremus, 2021; Rai, 2021), spread of hate speech and fake news (Hao, 2021b; Munn, 2020; Palmer, 2019) and incite for violence (Choudhury, 2020; Mackintosh, 2021). The divisive nature of the recommendation algorithm was found out already in 2018, when Facebook inc.’s internal research found out and reported that the recommended content provoked strong reactions but also increased the time they spent on the platform (Horwitz & Seetharaman, 2020). One former Facebook AI researcher said that “study after study” confirmed that models that maximized engagement also increased polarization (Hao, 2021a). On many occasions (e.g. Keach & Horwitz, 2021; Wade, 2021) Facebook inc.’s executives have decided to act against the company’s

internal reports, which may have also been the cause for many employees leaving the company (Hays, 2021). Internal memo has also shown that Facebook inc. has difficulties in hiring new engineers (Kramer, 2021). These problems are far from unique, but the recent scandals may have increased this problem in Facebook inc.'s case even further. Facebook also lost users for the first time in the social media platform's history and at the same time had its biggest single-day loss yet (Dwoskin et al., 2022). Jorge et al. (2022) analyzed "digital well-being" tools that were rolled out by many tech companies after facing critique on the negative effect their platforms had on people. Facebook's tool, called *Your Time*, quantified time spent on the company's platforms and the goal was to help those who struggle with online addiction. But the problem is often not the time people spend on these platforms, but the type of content they consume.

Haugen is not the only ex-employee that has criticized Facebook and social media in general. Back in 2017, a former Vice President for User Growth of Facebook, stated that

"[t]he short-term, dopamine-driven feedback loops that we have created are destroying how society works: no civil discourse, no collaboration, misinformation, mistruth and it's not an American problem. This is not about Russian ads. This is a global problem. It is eroding the core foundations of how people behave by and between each other." (Wong, 2017)

Other prominent ex-employees that have come out and criticized the company include Sean Parker (founding president), Roger McNamee (investor), Justin Rosenstein (engineer), Leah Pearlman (product manager), Yaël Eisenstat (head of "Global Elections Integrity Ops"), and Sandy Parakilas (operations manager). Their criticism has been part of the movement which has changed the Silicon Valley "techno-utopianism" into Silicon Valley dystopianism. For more extensive analysis on this subject, see Karppi & Nieborg (2021).

These recent leaks and the public discussion revolving around them have also caused many corporations to take measures to prevent events like this from happening again. For example, Microsoft is applying spyware, AI and machine learning for preventing its employees from leaking sensitive documents (Matyszczuk, 2021) and Facebook inc. has made their internal platform safety and election protection related message boards private instead of public, thus limiting the participants for open discussion. (Mac, 2021) It seems, that instead of creating a more open work culture, these leaks have caused the companies to close up and spy on their own employees even more.

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Exploring the affordances of popular private Facebook groups for women-only in Egypt

Shaden Kamel

University of Bayreuth, Germany

Shaden.kamel@uni-bayreuth.de

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Abstract

In Egypt, the creation and usage of private Facebook groups for women-only is vastly popular. Despite scholarship on women's social media use, research examining the emergence of online women communities, particularly in the Middle East and North Africa region, is scarce. This article draws upon a case study of five popular Facebook groups for women-only, which includes data collected from observation of the Facebook groups' features, twelve semi-structured face-to-face with Facebook group creators and members, and archival content. It uses the conceptual framework of Affordances to account for the mutual influence of the Facebook groups' structure, their users' perceptions, and their social context to understand why and how Facebook group creators and members use these Facebook groups. Results show that Facebook group creators and members perceive Facebook groups as safe spaces to express their personal and social distresses due to their privacy and exclusivity to women. These collective experiences have led to the manifestation of these Facebook groups as self-care spaces where FB group creators provide their members with information and entertainment to improve their health and well-being. Concurrently, FB group creators embarked on entrepreneurial practices by collaborating with brands and entities to provide these services.

Keywords: *Affordances, Facebook groups, social media, women-only, safe spaces, online communities*

1. Introduction

Technology-based affordances in Africa, such as mobile phones and social media platforms, have become highly accessible due to the presence of faster and cheaper internet provided by telecommunication companies (Ukpere et al., 2014). An ICT indicators Bulletin released by the Ministry of Communications and Information Technology in Egypt (2021) shows that Information and Communications Technologies (ICT) usage among Egyptians has become increasingly prevalent, particularly in urban households. It also shows that the usage of various forms of communications and information technology among male users is higher than that of females. For example, Internet usage was 61.5% for males compared to 53% for females, and owning a smartphone was 58.6% for males compared to 48.6% for females. However, among those who use the internet, females use ICT to participate in social network sites, nearly as much as men, with the indicators showing 89.9% for females and 91.1% for males. These figures indicate the potential of social media usage for female empowerment (Hurley, 2019).

However, recent literature exploring how women in the Middle East and North Africa (MENA) use opportunities that emerge via social media is scarce. On the contrary, Egyptian women's internet usage for activism and mobilization during the Arab spring in 2011 has gained vast academic attention

(Elsayed, 2016, p. 51). Even beyond the internet's role in a short revolutionary period, media generally play a substantial role in women's daily lives, essentially operating "as tools enabling them to assess, understand, negotiate and critique the world around them" (Elsayed, 2016, p. 51). Accordingly, it is relevant to recognize current trends in the MENA region of women's use of particular media platforms beyond visible political activism. Similarly, Skalli (2006) has called to study the forms of communication that women in the MENA region use to communicate their needs, produce capital of knowledge, and exhibit their issues and complex realities (pp. 39-40).

This article explores a popular trend of Facebook group (FB) creation for women-only and its usage in Egypt that started to be noticeable in 2015. Nowadays, there are countless Facebook groups for women-only that encompass thousands to hundreds of thousands of members, indicating their proliferation and popularity. Accordingly, the article aims to identify the reasons behind women's usage of these particular platforms. It uses the conceptual framework of Affordances as it offers guidance on accounting for the mutual and relational relationship between the perceived particularities of the platform structure, platform users' practices, and their social context. Hence, the following research questions are proposed:

Why do Facebook group creators and members use FB groups for women-only?

How do FB group creators and members perceive their usage of FB groups for women-only?

After the research questions have been identified, the existing literature on social media and identity will be reviewed to demonstrate how group-based identities, especially in relation to gender, are formed. Then the article presents literature on the conceptual framework of Affordances and its uses in media and communication studies to make sense of social media usage and practices. This is followed by a description and justification of the qualitative research design encompassing a case study approach of five popular Facebook groups for women-only. Lastly, after the results are presented, the discussion part draws back on the concept of Affordances.

2. Literature review

Since its early stages, social media platforms have cultivated connections among individuals and supported community building via technological features that enable users to form and sustain an extensive network of relationships (Ellison et al., 2011, p. 875; van Dijck, 2013, p. 200). Among other social networking sites, Facebook contains a wide online population of individuals whose online networks can be clustered into group-based identities (Nekmat & Lee, 2018, p. 2). Group-based identities are particularly visible in Facebook groups, as Facebook enables users to create a group based on common interests (Lijadi & van Schalkwyk, 2015, pp. 3-4).

The creator of a Facebook group could then interact with other users on this common interest by inviting them to join the group (Lijadi & van Schalkwyk, 2015). Alternatively, the creator may receive requests from Facebook users to join their Facebook group (ibid.). Accordingly, Facebook groups that are based on shared interests could be perceived as what (Marwick & Boyd, 2011) term "goal-oriented spaces" (p. 116) where their creation is based on imagined interested individuals that share similar

views as the creator. The visibility of individuals' interests falls in line with how Facebook's structure discloses individuals' identity information, which facilitates communication, enables social-information seeking behaviors, discussions on socially oriented issues, and fosters social engagements (Ellison et al., 2011, p. 887).

As social network sites, such as Facebook, support the concept of individuals displaying a single transparent identity (van Dijck, 2013, p. 200), it is noteworthy to account for the role of gender as identity information in social networking sites. Users are often required to identify their gender for access (Carstensen, 2014, p. 487). Gender identification is further emphasized on social networking sites, as "online identities are often strongly tied to offline bodies and social lives" (Dobson, 2015, p. 51). Furthermore, Friz & Gehl (2016) indicated that Pinterest's sign-up interface favors a feminine performance. Their study sheds light on how gender can be rooted in technological systems, which materializes as a product usually positioned across a dual-gendered spectrum of masculine and feminine (Friz & Gehl, 2016, p. 689).

Moreover, it is common among social media users to significantly exhibit the need for clear gender identities (Carstensen, 2014), as gender functions as a "social lubricant" for individuals to benefit from platforms and gain social knowledge (Marwick & Boyd, 2011, p. 120). This is reflected in the limited literature that empirically focuses on gendered, closed-off, and separatist private digital spaces (Clark-Parsons, 2018, p. 2129). For example, Clark-Parsons (2018) study showcased the development of a private Facebook group for women by a group of women that was perceived as essential to share experiences and distresses based on womanhood (pp. 2125-2126). Similarly, Pruchniewska's (2019) study showed that private Facebook groups for professional women are crucial to endorse women's interests by enabling them to self-represent themselves, express themselves, and seek support (p. 1364). Their results showed that potential members should exhibit a woman's identity to access its content, engage with other members, and exchange information. Furthermore, it shows how the concept of privacy has become "increasingly networked" as users' data are socially and locationally connected (boyd, 2012, p. 348).

In the context of the MENA region, Hurley's (2019) study on the female visual culture in the Arab Gulf region contributed to extending the focus from political actors and offered insights on how women's visual representations on social media shape highly gendered practices and are also influenced by socio-cultural context (p. 14). As for women's engagement in private digital spaces, Newsom & Lengel, (2012) indicated that women in the MENA region prefer to be heard in online spaces that are exclusively for them. While Hurley (2020) noted that many women in the MENA region are generally culturally discouraged and unwilling to display their faces or bodies online. These attitudes correspond with the prevalence of women enduring sexual harassment in North African societies that are revived in online spaces (Skalli, 2014, p. 46). However, exclusive spaces for women in the MENA region historically and currently have a significant impact. For example, offline private spaces for women had a multidimensional significance in constructing societal bonds and popular culture in Egypt (Sayigh, 1981). Mahmood (2001) indicated that spaces encompassing women's persistent presence, and spaces in which women self-regulate their lives away from men's influence, offer many prospects for

women's fulfillment and self-realization (p. 28). Nowadays, the prevalence of Facebook groups for women-only as private spaces has stirred public opinion and gained considerable attention from popular local television channels in Egypt on their impact on women's well-being and society. Accordingly, my article relevantly contributes to expanding the literature on the particular ways women use social media in the region by exploring the phenomenon of the prevalent usage of private Facebook groups among Egyptian women.

3. Affordances as a conceptual framework

Gibson (1986) initially developed the concept of Affordances to highlight the various prospects belonging to and offered by the environment. He pointed out that humans position themselves with objects in their environment, the range of affordances provided for action. In addition to including objects of the physical environment in his discussion of Affordances, he included people as a source of affordance (Hopkins, 2020, p. 49). He stated, "The richest and most elaborate affordances of the environment are provided by other animals and, for us, other people" (Gibson, 1986). Furthermore, for Gibson, human's direct perception is fundamental to identifying affordances.

Social scientists and media and communication scholars adopted the notion of Affordances to demonstrate the connection between technological properties, structures of social relations, and how users incorporate technological potentials into their practices (Evans et al., 2017; Hopkins, 2020; Hutchby, 2001, 2003; McVeigh-Schultz & Baym, 2015). They have extended or re-grounded Gibson's concept of Affordances (Costa, 2018; Hurley, 2019; Hutchby, 2001; McVeigh-Schultz & Baym, 2015). For example, McVeigh-Schultz & Baym (2015) developed the idea of Gibson's emphasis on perception and used the term "sense-making" instead (p. 2). They indicated that this term allows a wider discussion on more multifaceted issues developed through mediated encounters that unravel over time and include the participation of multiple actors.

McVeigh-Schultz & Baym (2015) study focused on how their study participants understand the affordances of a micro-social platform called Couple, which enables interaction among two individuals (p. 2). One of their study results showed that their study participants made sense of the affordances of Couple by comparing it to other social media platforms (pp. 6-7). For example, the participants found other social networking sites less suitable for romantic communication due to the presence of different publics. Consequently, their perspective highlights the perceived advantage of micro-social platforms. Furthermore, McVeigh-Schultz and Baym (2015) contended that remarkable insights arise from exploring how individuals make sense of micro-social platforms' "new and unfamiliar affordances" (pp. 6-7).

In her study, Costa (2018) criticized how the concept of affordance has been used to imply fixed properties of a platform, even though they have been centered on showing patterns of use within Anglo-American social contexts. As an example of this issue, she draws on Marwick and boyd's (2011) work that indicates that social media affordances have contributed to the collapse of social contexts that were initially separated in the offline world. Her ethnographic results on social media usage in Mardin, a south-eastern town in Turkey, show that a collapse of context does not exist there. Mardinites, in her

study, actively formed their online environments by using social media affordances such as the privacy setting and creating various online spaces that accommodate different groups of people. Her results show that Facebook's structure is not standardized and unchangeable and can only be comprehended within a particular cultural context.

Similarly, Hopkins (2020) emphasized human agency within the conceptual framework of Affordances (pp. 52-53). He points out that the perception of utilizing an affordance can develop from individuals' ability to contemplate their condition and goals and re-orient their practices accordingly to reach them. Furthermore, he believes Affordances is fruitful for understanding how users include new technologies in existing practices and create new practices enabled by these technologies (Hopkins, 2020, pp. 52-53). Furthermore, individuals not only actively use media to adapt to their environment but also create environments to improve their cognitive abilities and produce new ways of being affected to modify their emotional state and behavior (Hven, 2019, p. 115).

Hurley (2019) suggested paying attention to social media's triadic levels of affordances in relation to social actors and their situated context to evade universalizing and ethnocentric perspectives (p. 14). She elaborated that, firstly, the material affordances of social media are associated with certain actions such as sending a text or liking posts. Secondly, the conceptual or symbolic affordances of social media are reflected in identities, lifestyles, and faithfulness to communities through linguistic and visual gestures. This is reflected, as an example, through interacting in a shared language, exchanging pictures of hobbies, and partaking in local customs and rituals. Thirdly, the imaginary level of affordances is exhibited through practices signifying aspirational desires, sometimes implicitly, through image manipulation, image consumption, identity, self-presentation, and symbolic practices. She pointed out that recognizing these levels within the concept of affordances illuminates how affordances of social media are influenced by gender and sociocultural contexts (Hurley b, 2019, p.2).

Evans et al. (2017) indicated that Affordances is not a particular theory. Rather, it is a relational concept that develops in mutuality between users of technologies, the material characteristics of those technologies, and the situated context of use (Evans et al., 2017, p. 36). Accordingly, what individuals could acquire about and through affordances is influenced by this relationality (Lievrouw, 2014).

4. Methodology

4.1. Methods of data collection

A qualitative Case Study method was beneficial in exploring the current phenomenon of women's usage of Facebook groups exclusively for women. As this article's research questions are how and why oriented, this approach permits various aspects of the phenomenon to unravel (Baxter & Jack, 2015, p. 544). A case study approach encompasses multiple methods of data collection such as, and not-limited-to, observation and in-depth interviews (Eisenhardt, 1989, p. 534). Furthermore, using various methods of data collection provides the flexibility to approach the particularities of electronically mediated social environments and allows the researcher to be creative in collecting data and analyzing it (Urquhart & Vaast, 2012, pp. 6-7).

Five Facebook groups were purposively chosen as case studies to exemplify the popular types of FB groups used by women in Egypt. They share common structural characteristics, in which they are 1) private FB groups, 2) created by Egyptian women, 3) created for women-only, 4) “women-oriented” through content that includes a mixture between family and marital relationships, motherhood, fashion, and beauty topics. Also, they were chosen for their popularity and prevalence based on the number of members in the FB groups, high traffic postings, and high interactions between platform users (Kozinets, 2002, p. 63).

Firstly, the Facebook groups' structure that included the FB groups' names, descriptions, rules, and technical features were observed. These elements contribute to the Facebook groups' structure, which is important in understanding the developments by which they are produced or consumed (Mason, 2002, p. 106). Also, it supports exploring how platforms' affordances influence certain trajectories (Hopkins, 2020, p. 49). It is important to note that communication patterns are complex, occurring across multiple channels (Hampton, 2017, p. 171). The private Facebook groups in this study are linked to public sister Facebook group pages. Through links, certain forms of communication relevant to the Facebook groups under study occurs through sister platforms. Thus, data is also collected from the Facebook groups' sister public pages, such as Facebook pages and public Instagram pages. Bryman (2012) noted that qualitative researchers who study online support groups often merge document collection and online ethnography as data collection methods. This merge results from technological features that allow researchers to observe earlier interactions (Hampton, 2017). Accordingly, this data collection form is similar to content analysis and archival methods (Hampton, 2017). However, restricting the study to observation does not fully account for users' culture and social context (Hampton, 2017, p. 171). Furthermore, it does not account how individuals use particular social media and why they use them (Goggins & Petakovic, 2014, p. 1379).

Therefore, this article additionally accounts for the perceivable orientations of technology users (Hutchby, 2003). It took an interactive approach with FB group creators and members via interviews (Bryman, 2012, p. 445) to understand platform users' “logics of use and social expectation” (Couldry, 2008, p. 383). This approach is useful for understanding how the platform's structure converges with platform users to create particular affordances or uses (Hurley, 2019, p. 1).

Before approaching participants for interviews, observation was used to gain information to get acquainted with the online communities' features, such as group membership, interests, and language (Garcia et al., 2009, p. 63; Kozinets, 2002). This observation was required to extensively plan and prepare to conduct interviews with key informants with the knowledge and expertise related to the research's specific questions (Hicks et al., 2021, p. 2859). Then Facebook group creators and active members were identified and approached for qualitative interviews. Accordingly, a purposive sampling strategy was used to get hold of interviewees and explore the phenomenon in-depth with its complexities (Mason, 2002, p. 121). FB group members and creators were two categories of individuals purposively sampled to provide diverse, distinct, and vital information about their usage of the Facebook groups (Mason, 2002).

Twelve semi-structured face-to-face and online interviews were conducted. Face-to-face interviews were conducted in Cairo in 2019 with two Facebook group creators, and online-based interviews were conducted with three Facebook group creators and seven members. Five online interviews were similar to telephone-based interviews but were mediated by technology (Bryman, 2012, p. 669). They lasted between 60 to 90 minutes, except for one interview that took 25 minutes. The other five online interviews with Facebook group members were conducted via chatting on Facebook messenger. They took place through an asynchronous discussion. I asked a question at a time, and users responded at their convenience over 2 to 3 days. They live in urban cities, mainly in Cairo. Their ages are between the late 20s and late 30s. I translated the interviews from Arabic to English.

The FB group creators interviewed are Zeinab Al Ashry, the creator of Confessions of a Married woman FB group; Mai Demerdash, the creator of *7ad Ye3raf (Ladies ONLY)* FB group; Dina Nasser, the creator of *Mini Mom* FB group; Salma El-Awaam, one of the creators of *Sisters Gang* FB group, and Shereen Niazy, the creator of *EVEpedia* FB group. However, all the interviewed FB group members' names in the results section are pseudonyms to protect their privacy, and they are members of multiple FB groups included in this study.

4.2. Ethical considerations

Electronically mediated social contexts provide the opportunities to collect various data, which have recently become integral to a social researcher's toolbox (Vaast & Walsham, 2013, p. 10). However, ethical issues concerning collecting data from the internet have recently been extensively discussed and contested (Bryman, 2012, p. 679). These issues pose challenges and considerations in collecting and analyzing social data (Olteanu et al., 2019, p.2; Vaast & Walsham, 2013, p.10). Even though the FB groups under study contain thousands of members, the content of these Facebook groups is only visible to their members due to the privacy setting of the Facebook group. Accordingly, the data collected from observation are publicly visible and accessible information from the FB groups' interface, such as the FB groups' names, descriptions, names of creators, and technical settings. Furthermore, images presented in the article's results section are retrieved from public sister media pages associated with the studied FB groups. As for the interviews conducted, informed consent was received from the participants.

4.3. Data analysis technique

Thematic Analysis was used to identify patterns by constantly comparing and contrasting data segments between interview responses, observation, archived documents, and existing literature (Floersch et al., 2010, p. 409). Furthermore, arising themes particular to the studied phenomenon were compared with similar previous phenomena (Floersch et al., 2010, p. 409). By considering various previous literature indicates, similarities, contradictions, and reasons were explicated (Eisenhardt, 1989, p. 544).

The data analyzed were coded line by line using terms and words produced by the participants or data sources (Charmaz, 2015; Floersch et al., 2010; Gioia et al., 2013). For example, Facebook group creators and members mentioned terms such as emotional support, encouraging words, stress, a place

to vent out, seeking advice, raising awareness, me-time, self-care, gifts, having fun, and stress-free zones. Then themes developed through Axial Coding, in which codes were compared for mutual characteristics and meanings (Floersch et al., 2010, pp. 413-414). At this stage, similarities and differences were developed between categories by creating labels or phrasal descriptions (Gioia et al., 2013). These labels provided contextual information to the codes. For example, codes such as venting out, emotional support, and stress-free zones were labeled with the contextual background of women in Egypt organized by society, cultural traditions, religion, and economic situation.

Furthermore, in the coding process, patterns of interaction between Facebook group creators and members of the Facebook groups were revealed. For example, codes produced from members' interviews related to their well-being were compared to codes that reflect FB group creators' entrepreneurial practices of providing gifts, beauty, and self-care. Thus, the coding process developed in subsequent phases as concepts and themes concurrently and progressively emerged (Vaast & Walsham, 2013, p. 18).

For the selective coding stage, the author referred to the existing literature on digital and social media platforms and the conceptual framework of Affordances. This stage is alternatively termed by (Kalpokaite & Radivojevic, 2019, p. 52) as Elaborative Coding. Concepts identified from mentioned literature and conceptual framework are compared to emerging data. This is particularly important for research, which relies on a limited number of case studies (Eisenhardt, 1989, p. 545).

5. Results

5.1. Structure of Facebook groups for women-only

The Facebook groups' structures combine several elements that function, as Burgess (2015) describes, as taglines that convey their affordances (pp. 282-283). Firstly, the names of the Facebook groups highlight their relationship with womanhood. For example, Confessions of a Married 'Woman' 'Miss'basket, Mini' Mom,' 'Eve' pedia, 7ad ye3raf 'Ladies Only' 'Sisters' gang. Secondly, the description of Facebook groups indicates that they center on women-related topics. Such as, the FB group description of Sisters gang describes the topics discussed in the FB group as "anything that women care about". While the description of Rahet Bally (peace of my mind) – It's a Happy Mommy Place, states that it provides "an inclusive support platform for all Egyptian mothers".

The name and description of Facebook groups convey that their content is similar to the prevalent content of women's magazines, which includes discussions about current social or family-related concerns, parenting, health, and fashion (Sawchuk & Ly, 2022). Furthermore, they are based on what Friz & Gehl (2016) describe as a range of gender stereotypes and imageries, which targets a particular gender demographic and are built on pre-existing notions of femininity (Van Oost, 2003, p. 195, as cited in Friz & Gehl, 2016, p. 689).

Another important element that contributes to the structure of 'Facebook groups for women' is its setting as Private FB groups, which means only Facebook group members can see the content of the Facebook group. On a visual level, most of these Facebook groups are pink-themed. Furthermore,

while they are online groups, FB group creators have pinned the geographical location of the FB groups to Egypt. These structural elements chosen deliberately by the FB group creators to show how they particularly cater for Egyptian women. Similarly, Friz & Gehl (2016) indicated that platform designers conceive how their users to be like and how they want them to perceive their platform (p. 690).

5.2. Facebook groups for women-only as safe spaces

The Facebook group creators and members interviewed frequently described Facebook groups in this study as a "safe space" for their exclusivity to women. FB group members drew on their social and cultural environment for their preference and attraction to use and engage in these online spaces created just for women. For example, fear of harassment, particularly sexual harassment from men, was one of the attributed reasons. This sentiment is reflected by Yara, a member of multiple private FB groups for women-only:

"You cannot imagine the amount of harassment [by men in public Facebook pages/ groups]. So, of course, all these Facebook groups do not have men on purpose. It will not be a safe space with men in it, just like the community itself [referring to offline public mixed spaces]."

Moreover, it was also generally indicated that exclusivity for women-only provides a safe space to share information about topics that are culturally perceived as personal or sensitive related to, and not limited to, women's physical, sexual, and mental health. FB group members explained that such topics are perceived as "taboo" in public offline or online spaces making these Facebook groups ideal spaces where women in Egypt could share their stories. Such topics convey patriarchal domination and oppression within the home in Egypt, linked to women's direct surroundings, including mothers, fathers, relatives, lovers, and spouses, which are generally still perceived as taboo (Al-Ali, 2000, p. 115). For this reason, Rana, a member of multiple Facebook groups, indicated that FB groups exclusively for women are essential for women in a conservative society to speak about their concerns and seek solutions. She believes women's issues conveyed in these FB groups mirror societal and community problems that women face in Egypt that are often silenced.

Other members' stated that these Facebook groups provide the strength to face societal judgments and stigmas. Samira and Rokaya indicated that they like to share their success stories on FB groups to inspire and motivate other women who identify with the same societal stigmas to follow in their footsteps. For instance, Rokaya recalled sharing her personal experience with divorce on Facebook groups to break stigmas surrounding women getting a divorce and stepping out of abusive marriages:

"I like to share my story in women-only groups to show women that you can leave an unhappy marriage and be happy. I tell my story because it is very common, and I want to educate women. I want to empower them and tell them we can achieve more. Facebook groups for women raise awareness and perhaps give hope to end a cycle of abuse."

Similar sentiments were expressed by Noha, a member of multiple FB groups, about wanting to be a role model, create awareness and inspire women going through the struggles of divorce. She said:

"Before I got divorced, I didn't have a role model. There were no posts on Facebook groups for divorced women on what to do. So maybe my post is like a heads up for any girl who will pass through the same circumstances to make the best out of it. She can continue or develop her education or do something for herself amidst all that [struggle]."

Noor, a member of multiple FB groups, pointed out that seeing FB group members' stories makes women stronger in the face of adversity through learning from their experiences. For this reason, she believes FB groups for women have impacted her personally and women in Egypt. She explained:

"Their [FB groups] impact has made the woman stronger. My mom thinks that our generation has become stronger than her generation. We [women in Egypt] didn't know many things, like our rights. We help each other out. FB groups give power to the woman. It makes her feel I [the woman] am an entity and very important in society. The most important aspect of it [FB groups] is that it lifts their [women's] morale, and then everything else that follows becomes easier."

The FB group members' perspectives shed light on the importance of the usage of FB groups to express personal and social struggles. These sentiments have paved a foundation for women's usage of these FB groups as a getaway from their daily life struggles. As a result, FB groups have become spaces for self-care to uplift women's spirits.

5.3. Facebook groups for women-only as self-care spaces

The FB group creators interviewed exhibited a responsibility to enhance their FB group members' well-being and lives by engaging them with entertaining content that promotes self-care. Shereen Niazy, the creator of *EVEpedia* FB group, believes that women put themselves as the last priority due to daily struggles and pressures. For this reason, she finds her FB group significant as a space that fosters self-care and self-love among its members. Likewise, Mai Demerdash, the creator of *7ad Ye3raf? (Ladies ONLY)* FB group considers FB groups for women as platforms for awareness on how women could take better care of themselves and "go out, buy things, wear them and have fun".

Furthermore, Salma El-Awaam, the creator of *Sisters gang* FB group, pointed out that women need to attain information related to self-care because they do not have time for themselves. She relied on her personal experience with this issue and perceived it as a shared struggle among most Egyptian women:

"Egyptian women, 99% of their problems are feeling pressured. You will find that 50 percent of the information [in her group] is related to skincare and making time for yourself because this is what the women in the group need. Personally, I have a problem with time. I cannot find time for myself. When my son sleeps, I use my phone, go on the group, see what has been happening on it, and create a funny comic, and sometimes this is my 'me time'. At night the activity [in the group] is the highest when women finish all their work. They engage, like, and comment."

This sentiment of having limited time was similarly echoed by Nasser, the creator of *Mini Mom* FB group, who dedicates a day in the week in her group for 'me time' to encourage women to post something to make themselves feel better:

"It could be something as simple as having a coffee or watching TV to the bigger things, such as women traveling outside Egypt and leaving their children with their mothers. Some women would even post that they could not have any me time. They do not have the time to eat or shower, simple things that a normal human needs, they cannot do it."

FB group creators have also used their FB groups to connect women with various experts who provide information on women's well-being and health. Shrook, a member of multiple Facebook groups, explained that FB groups for women-only provide her with live-videos tutorials that feature doctors, life coaches, nutrition experts, and make-up artists. She emphasized the practicality of these FB groups in

providing services “without having to pay for it” while saving up the time she would have wasted on commuting to receive those services if it wasn’t for these FB groups.

Product or service giveaway competitions sponsored by international or local brands are a prominent form of entertainment in these Facebook groups. Demerdash, the creator of *7ad Ye3raf? (Ladies ONLY)* FB group, indicated that she regularly posts announcements informing members of brand collaborations. She further explained that her FB members have a chance of winning a free product or service if they engage (for example, like, comment, and tag their friends) with these announcements. El-Awaam, the creator of *Sisters gang* FB group, explained the reason behind collaborating with brands:

“We wanted to be a comfort zone when we [she and her sisters] first started [the FB group]. Then when the group got bigger, and the responsibility got bigger, we wanted our groups to have sponsors. We have done collaborations [business] related to things the group members ask about like skincare, hair, micro-blading, nails, clinics, and dermatologists. We created a competition with a Brazilian micro-blading sponsor and things like cosmetics. So we got to the point that people like our group, so we want to make them happy.”

Yasmeen, an active member of many FB groups for women, indicated that such entertainment content is vital, or the Facebook groups would be depressing if they only conveyed women’s struggles. Similarly, Niazy felt that her Facebook group *EVEpedia* is “not all serious,” and it’s a space where “women can zone out, have fun, and get gifts”.



Figure 1. Example of a brand-sponsored competition retrieved from COMW FB page

Facebook groups for women-only explored in this study have public sister social media platforms, such as Instagram accounts and Facebook pages that promote product or service giveaways sponsored by international or local brands. Figure 1 shows an example of these brand-sponsored giveaway competitions retrieved from the *Confessions of a Married Woman* Facebook page.

It encourages members to share and inspire others with their life transformation stories through weight loss or sports under the #Love_Yourself_Live_Happy hashtag and get a chance to win a home appliance. Accordingly, these competitions stimulate members' engagement in FB groups by narrating their inspirational stories related to their life transformation (such as weight loss or successful careers) despite being primary caregivers and personal adversities.

6. Discussion

The Facebook groups under study are a gendered product of how Facebook allows the creators to design their Facebook groups' structure. Their names and descriptions visually and linguistically signal a woman's identity and commitment to the women's community in Egypt. This conveys what Hurley (2019) termed a platform's conceptual or symbolic affordance. Their privacy setting functions as what (Lievrouw, 2014) termed as a functional affordance that works to facilitate connection among those who identify as women and restrict access to those who identify as male users. It further functions to solidify a women-only private network, where users' data are socially and locationally bound (boyd, 2012, p. 348). This conveys that bodies and gender are becoming exceedingly inseparable from technological networks as they afford them with structure and meaning (van Doorn, 2011, p. 536). Accordingly, these elements structure these FB groups as spaces of shared interests, which consequently spark discussions on socially oriented issues and foster social engagements (Ellison et al., 2011, p. 887).

Equally important, media technologies need to be understood by recognizing their gendered cultural use (van Doorn, 2011, p. 536). Interviewed FB group creators and members largely attributed cultural and societal reasons to their preference to engaging in private Facebook groups exclusively for women. These results concur with Costa's (2018) argument that social media's structure impact on users is not standardized. Rather interview participants draw on their social context to make sense of their usage of a particular social medium. As a measure against sexual harassment by males online and offline, the members interviewed preferred to engage in Facebook groups as segregated spaces for women-only. This mirrors offline segregated public spaces for women in Egypt, such as transportation, fitness facilities, and recreational areas Khairat (2019), which women opt to use to navigate day-to-day activities comfortably. Accordingly, this reflects how platform users integrate pre-existing practices into their media usage that is also culturally influenced (Hopkins, 2020, p. 53). Concurrently, the structure of the Facebook groups provides its members, in Friz & Gehl (2016) words, "the freedom of act within the parameters of a technical design" (p. 689).

Additionally, FB group members perceived FB groups as significant spaces for women-only to share their stories, seek help and find solutions to issues regarding their day-to-day struggles and societal stigmas they collectively face. These sentiments mirror the platforms' imaginary affordances in enabling the expression of aspirational desires (Hurley, 2019). Accordingly, gender in these female-dominated networks functions as a social lubricant for individuals to benefit from the platforms, gain social knowledge, and express shared experiences and circumstances (Madhavan et al., 2018, p. 843; Marwick & Boyd, 2011).

Meanwhile, these FB groups for women only provide what Papacharissi (2016) described as a "structure of feeling" where members could provide their narratives about "who they are, whom they imagine they might be and how to get there" (p. 14). Furthermore, their connective affordances enable what Soronen and Koivunen (2022) termed "platformed intimacy," where members develop "meaningful attachment" by imagining the presence of others (p. 4). Thus, this environment that invokes feelings of "proximity and belonging" reflects platforms' affective impact (Soronon & Koivunen, 2022, p. 14).

Moreover, the privacy setting of the FB groups invokes feelings of familiarity and intimacy further, making what seemed like private-oriented discourses become more public by allowing individuals to "listen to others' stories" (Wetschanow, 1999, p. 3). These vernacular shared and recognized mediated experiences in the form of story-telling carry a feeling of commonality and produce solidarity to receive emotional support and relieve stressful circumstances (Madhavan et al., 2018, p. 843; Pribram, 2019, p. 182). Simultaneously, the central affordance of these private FB groups in offering tangible support through the like and comment feature provides validation, acknowledgment, and encouragement of women's shared personal stories (Pruchniewska, 2019, p. 1374). As a result, emotions manifest in the platform offering a sequence of prospects (Pribram, 2019, p. 182).

One of these prospects is the manifestation of these FB groups as platforms for self-care. FB creators utilized their FB groups, as Hven (2019) terms "affective niches" (p. 107), which implies the usage of a medium to modify and direct its users' emotional situations and produce new forms of affective practices. They connected their FB group members with various tools for self-care via the FB groups to uplift their members' collective feelings of gendered pressure and struggles. Self-care tools included connecting their members with experts to inform them on how to care for their health and well-being. Thus, the platform's usage in connecting its users with various entities highlights its relational affordances in providing opportunities for agentic action (Hutchby, 2001; Lievrouw, 2014).

Lastly, Facebook group creators' collaboration with international and local brands to give away products or services highlights how they embarked on entrepreneurial practices that emerged as a result of the thousands of members' active usage of their Facebook groups. This concurs with McVeigh-Schultz & Baym (2015) assertion that individuals discover opportunities from the available affordances and create unanticipated new practices (p.2). Furthermore, their new entrepreneurial practices illustrate how new media platforms enable the usage of "affective niches" in marketing mechanisms (Hven, 2019, p. 107). On the one hand, these advertising practices indirectly influence members as potential purchasers via camouflaged engaging content, alternatively termed advertainment (Czarnek-Wnuk, 2017, p. 73). On the other hand, commercial entities profit from this discourse of pleasing women by exposing them to targeted advertising of cosmetic services and promotional packages (Gill, 2007, p. 153).

7. Conclusion

Drawing on the conceptual framework of *Affordances*, Facebook groups for women only provide the space where its members adapt to their life circumstances via a collective way of expression (Pattwell,

2019). The Facebook groups' structure as private FB groups for women only provides an environment where members share their stories, struggles, and aspirations comfortably. Furthermore, it enables its users to display support, which fosters community building and a feeling of belonging (Soronen & Koivunen, 2022, p. 14). These stories are often related to pressures, struggles, and societal stigmas that FB group creators and members collectively connect to and empathize with as women.

FB groups for women enabled a new form of female entrepreneurship to surface that incorporates larger practices of sociality (Steel, 2017, p. 235). FB group creators developed audience-building practices, similar to traditional media work, by providing various affective media content that merges information with entertainment (Czarnek-Wnuk, 2017, p. 73; Duffy, 2016, p. 14; Papacharissi, 2016). Entertainment builds rapport among members, amplifies feelings of a supportive community, and appeals to potential users (Baym, 2010; Czarnek-Wnuk, 2017, p. 68). Consequently, women's engagement with affective and amusing content become commodified via the platform's capitalist structure that sustains affective attachment (Dean, 2019, p. 173; Duffy, 2016, p. 14). This suggests that while the structure of these Facebook groups has enabled story-telling and solidarity, social media platforms are structured to stimulate and monetize the activity of content sharing (Pattwell, 2019, p. 129).

However, even though neo-liberal capitalist tendencies ingrained in social media structures ultimately influence platform users' practices, platform users are not merely submissively receiving goods or meanings (Livingstone, 2014, p. 24). The manifestation of these Facebook groups from platforms of story-telling to self-care platforms highlights the importance of accounting for the context in which self-care information is prevalent and perceived as important (Downey, 2014). In the face of shared gendered personal and societal pressures, FB group members' usage of Facebook groups for self-care exhibits what Jackson (2014) describes as "subtle acts of care" and "everyday repairing" (p. 222). Accordingly, these Facebook groups serve as safe spaces in times of distress, whereas they serve as spaces for self-care when amusement is required.

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Engagement en la verificación de datos. Análisis de los vídeos más vistos de los fact-checkers iberoamericanos en YouTube en 2021

(Fact-checking engagement. Analysis of the most viewed videos of Ibero-American fact-checkers on YouTube in 2021)

Javier Abuín-Penas
Universidade de Vigo, España
jabuin@uvigo.es
0000-0002-7822-7526

Julia Fontenla-Pedreira
Universidade de Vigo, España
julia.fontenla.pedreira@uvigo.es
0000-0001-8770-4761

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Abstract

In recent years, disinformation has been a challenge for society. Faced with this challenge, initiatives dedicated to data verification, or fact-checkers, have become an essential tool to certify the veracity of published content. To carry out their work, these organizations use social networks to disseminate their content. The objective of this research is to study the activity on YouTube of 11 Ibero-American fact-checkers linked to the International Fact-Checking Network (IFCN) who have an account on this platform during the year 2021. In this study, a quantitative content analysis is carried out with to determine the engagement of the videos that have captured the most attention from users based on the volume of views and interactions collected. The results show a great disparity in terms of viewing and engagement, which vary greatly depending on the country to which each verifier belongs.

Keywords: *Fact-checking, disinformation, video, YouTube, engagement*

Resumen

En los últimos años la desinformación ha supuesto un desafío para la sociedad. Ante este reto, las iniciativas dedicadas a la verificación de datos, o fact-checkers, se han convertido en una herramienta esencial para certificar la veracidad de los contenidos publicados. Para desarrollar su labor estas organizaciones utilizan las redes sociales para difundir sus contenidos. Esta investigación tiene como objetivo estudiar la actividad en YouTube de 11 los fact-checkers iberoamericanos ligados a la International Fact-Checking Network (IFCN) que poseen cuenta en esta plataforma durante el año 2021. En este estudio se realiza un análisis de contenido cuantitativo con el fin de determinar cuál es el engagement de los vídeos que han captado mayor atención de los usuarios en base al volumen de visualizaciones, me gusta y comentarios recibidos. Los resultados constatan una gran disparidad en términos de engagement entre los fact-checkers, que varían en gran medida en función del país al que pertenece cada verificador.

Palabras clave: *Fact-checking, desinformación, video, YouTube, engagement*

1. Introducción

Las plataformas digitales, y más concretamente las redes sociales han potenciado el aumento de las noticias falsas, convirtiendo la lucha contra la desinformación en un reto global (Bautista et al., 2021). Es aquí donde los fact-checkers, organismos dedicados a la verificación de hechos, deben centrar sus esfuerzos desmintiendo noticias falsas, bulos y otros contenidos desinformativos.

Dentro de los formatos utilizados para la comunicación a través de las redes sociales, el vídeo se ha convertido en el contenido más consumido por los usuarios. Según el informe “Top Tendencias

Digitales 2022” (IAB Spain, 2022), el vídeo supondrá un 82% del tráfico total de Internet en 2022. En este contexto, YouTube se ha posicionado como la segunda red social preferida por los usuarios para encontrar, leer, compartir o discutir noticias de actualidad (Newman et al., 2021). Además, entre los consumidores de noticias en las redes sociales, los usuarios utilizan YouTube tanto como una fuente de información como una plataforma de entretenimiento, según el Digital News Report 2021 (Newman et al., 2021).

Así, el análisis del contenido del video es fundamental para comprender la construcción de narrativas, sobre todo cuando se trata de verificar informaciones falsas. Si bien investigaciones recientes (Ramahí-García et al., 2021) observaron un incremento de la presencia de iniciativas de fact-checking en YouTube a lo largo de la última década, también evidenciaron una gran disparidad en la gestión de las cuentas y su alcance.

2. Marco teórico

2.1. El fact-checking contra la desinformación

La desinformación y las diferentes formas de combatir esta problemática se han convertido en temas de creciente actualidad. La progresiva pérdida de confianza de la sociedad ante diferentes organizaciones (medios de comunicación tradicionales, gobiernos, instituciones públicas etc.) y el mayor uso de las redes sociales generan condiciones oportunas para difundir sus mensajes con informaciones falsas (Humprecht et al., 2020).

En Internet, la desinformación se propaga más rápido y llega a más personas que los propios hechos reales (Ball & Maxmen, 2020; Swire-Thompson & Lazer, 2019). Además, en los últimos años la información falsa circula con enorme facilidad entre plataformas, evadiendo la moderación o el control y dificultado la veracidad o falsedad de los contenidos en Internet (Ferrara et al., 2020). Esta situación hace que diversos actores de la sociedad como gobiernos, fundaciones, investigadores académicos o empresas tecnológicas; deban dedicar parte de sus esfuerzos en comprender y mitigar la propagación de información falsa a través de las plataformas digitales (Graves & Mantzarlis, 2020).

Entre las diferentes formas existentes para combatir la desinformación se encuentra la verificación de hechos (fact-checking). En la actualidad, este tipo de entidades se consideran como una herramienta esencial para luchar contra la información falsa. Si bien se ha observado en algunas investigaciones que las correcciones de noticias falsas mediante la verificación pueden generar un efecto contraproducente (Nyhan et al., 2013), estudios recientes demuestran que los fact-checkers (las entidades que se encargan de la verificación de hechos) tienen éxito al reducir las intenciones de compartir titulares falsos, mejorar las capacidades para evaluar afirmaciones concretas y ayuda a precisar las creencias de los individuos (Amazeen et al., 2015; Nyhan et al., 2020; Porter & Wood, 2022). Estas organizaciones especializadas en la verificación de datos, también llamadas fact-checkers, se han convertido en una herramienta esencial para comprobar y verificar todo tipo de declaraciones, noticias o informaciones (Graves et al., 2016).

En el ámbito académico el interés sobre este tipo de iniciativas es cada vez mayor. Varios estudios se han centrado en los efectos de la exposición a las verificaciones (Hameleers & van der Meer, 2020; Walter et al., 2020); otros se han encargado de trazar un mapa de la presencia de los fact-checkers (Dafonte-Gómez et al., 2021; Rodríguez-Martelo et al., 2022; Rúas-Araújo et al., 2022) y, más recientemente, unos pocos han estudiado sus estrategias de comunicación en la web (Máiz-Bar & Abuín-Penas, 2022), en las propias cadenas de televisión (Rúas-Araújo et al., 2021) o en diferentes redes sociales como Facebook (Dafonte-Gómez et al., 2022), Twitter (Pérez-Curiel & Velasco-Molpeceres, 2020), Instagram (Míguez González et al., 2021), YouTube (Ramahí-García et al., 2021) o Tik-Tok (Bautista et al., 2021).

2.2. Los vídeos, YouTube y el engagement

En los últimos años el consumo de vídeos por parte de la sociedad ha aumentado exponencialmente y dentro de este tipo de contenidos, las noticias ocupan un lugar relevante. Encuestas como la llevada a cabo por Newman et al. (2021) indican que el 67% de los usuarios de Internet consume noticias en vídeo semanalmente.

En España, según el Digital News Report de 2021 (Newman et al., 2021), dos de cada tres usuarios adultos de internet eligen los vídeos para el consumo de contenidos informativos o de actualidad. Los formatos de vídeo que se consumen son variados (clips, programas o emisiones en directo) y son vistos al menos una vez a la semana (Amoedo et al., 2021). Este informe apunta que los vídeos de noticias se consumen el doble en plataformas externas como YouTube, llegando a ser esta cifra del 52%, en comparación a las webs y aplicaciones propias de los medios de comunicación, con apenas un 26%.

Las organizaciones encargadas de la verificación de hechos no son ajenas al crecimiento del consumo de vídeo. En este aspecto, diferentes investigaciones (Ramahí-García et al., 2021; Mazaira-Castro et al., 2019) constatan el incremento de la presencia de perfiles pertenecientes a este tipo de entidades en plataformas como YouTube, donde también observan un aumento en la difusión de contenidos audiovisuales a través de estas redes sociales. Pese a este dato, los fact-checkers evidencian importantes diferencias en la gestión de las cuentas y el alcance de sus contenidos en YouTube, aunque en términos generales, el aumento de suscriptores y visionados de los vídeos publicados aumenta progresivamente (García-Crespo et al., 2021).

A principios del año 2022 más de 80 organizaciones independientes de verificación de 40 países firmaban y publicaban una carta abierta a la CEO de YouTube. En este documento público los fact-checkers apuntaban a que YouTube es uno de los principales canales de desinformación en mundo actual, instando a la plataforma a tomar “medidas eficaces contra la desinformación y la información errónea” y a hacerlo “de la mano de las organizaciones independientes y apartidistas de verificación” (Maldita.es, 2022).

3. Metodología

El presente artículo tiene como objetivo principal identificar los vídeos publicados por los fact-checkers iberoamericanos que han generado mayor engagement en YouTube durante el año 2021. A partir de este, se analiza la relación existente entre las visualizaciones y el engagement que reciben los vídeos registrados y, en segundo lugar, se analizan cuáles son las temáticas que mayor interés suscitan entre los usuarios, así como los comentarios que surgen alrededor de estos.

Se ha optado por analizar la comunicación en YouTube debido a que se trata del segundo sitio web más visitado del mundo, la segunda red social en número de usuarios activos mensuales y la plataforma de vídeo más utilizada (McLachlan, 2022).

Esta investigación parte de una muestra de 51 vídeos publicados por verificadores iberoamericanos que forman parte de la International Fact-Checking Network (IFCN) en la fecha en que se desarrolla el estudio (febrero 2022). La IFCN es una unidad del Instituto Poynter que agrupa organizaciones que se dedican a la verificación de hechos a nivel internacional, bajo unas normas estrictas de equidad y transparencia entre la comunidad mundial de verificación de datos (Poynter Institute, 2022). Por no contar con un perfil de YouTube específico para la labor de fact-checking se han descartado los siguientes algunos verificadores (El Sabueso (Animal Político), EFE Verifica (Agencia EFE), Estadão Verifica (Estadão), Observador - Fact Check (Observador), Polígrafo, UOL Confere y Verificador de La República), analizándose los canales de aquellos que si disponen de él: Agência Lupa, Aos Fatos, Bolivia Verifica, Chequeado, Colombiacheck, Cotejo Info, Ecuador Chequea, Fast Check CL, Mala Espina, Maldita.es y Newtral.

Se han recogido los datos de interacción y alcance de los canales de YouTube propuestos y de los propios vídeos. Para la extracción de datos se utilizó la herramienta YouTube Data Tools (Rieder, 2015), que permite descargar los metadatos de los canales de YouTube, sus vídeos y sus listas de reproducción; datos a los que se les ha dado un tratamiento posterior

El análisis de contenido se llevó a cabo tomando como referencia la investigación realizada por Segarra-Saavedra & Hidalgo-Marí, 2018), quiénes analizaron el engagement y la viralidad de los anuncios publicitarios más vistos en España, y se ha adaptado al perfil de los fact-checkers de la presente muestra. Para ello se han tenido en cuenta las variables de tipo cuantitativo seguidas por los autores y que a continuación indicaremos. En primer lugar, se ha realizado el estudio de los canales comparando las variables de suscripción, vídeos publicados y visualizaciones totales por canal. Tras ello, se ha realizado una ficha de análisis por cada uno de los perfiles de los verificadores, con las siguientes variables introducidas por los autores antes mencionados: título, duración, número de me gusta, comentarios, visualizaciones, y clasificación temática llevada a cabo de manera inductiva; y se ha aplicado a los 51 vídeos que conforman la muestra (Mala Espina Check ha publicado un único vídeo en su canal de YouTube durante el año 2021, el resto de contenido es previo o no tiene fecha concreta que identifique cuándo ha sido publicado).

Para la muestra, se han seleccionado los cinco contenidos de cada uno de los fact-checkers que han obtenido mayor número de visualizaciones, y se ha calculado el engagement generado a partir de

la fórmula sumatoria del número de reacciones dividido entre el número de mensajes (Herrera-Torres et al., 2017) –el número de reacciones entendido como el total de me gusta, comentarios y visualizaciones recibidos-. A partir de esta selección se ha hecho un análisis de contenido en cuanto a las temáticas tratadas en las propias publicaciones, así como en los comentarios generados por los usuarios. Para ello se analiza si las publicaciones en esta red social de los perfiles de los verificadores crean conversación, de acuerdo con algunos de los principios dialógicos básicos establecidos por Kent & Taylor (2002): información útil, generación de visitas reiteradas y mantenimiento del bucle dialógico.

El principio del bucle dialógico permite establecer si existe conversación e interacción con los usuarios, de dos modos: - planteando preguntas que responden los usuarios, o bien - contestando desde los implicados en la gestión de cada perfil a los comentarios realizados por los seguidores (Fontenla-Pedreira et al., 2020).

4. Resultados

Centrando el análisis en los perfiles “corporativos” de YouTube de estos nueve verificadores, el canal que mayor número de visualizaciones posee es Newtral, seguido de Agencia Lupa y Chequeado. En cuanto a número de suscriptores, los datos fluctúan entre los verificadores españoles Newtral y Maldita.es, quienes también concentran el mayor número de vídeos en el canal (Tabla 1).

Tabla 1. Canales de YouTube de los fact-checkers

Nombre	Visualizaciones	Suscriptores	Videos
Newtral	2.675.227	19.800	848
Agência Lupa	340.740	3.060	296
Chequeado	292.486	4090	293
Maldita.es	262.129	3.570	470
Ecuador Chequea	261.661	1.330	328
Aos Fatos	51.557	1.880	29
Colombia Check	29.075	849	82
Cotejo Info	18.054	90	185
Bolivia Verifica	15.497	147	174
Mala Espina	4.654	369	7

Tabla 2. Datos generales y promedios los fact-checkers en YouTube

	Duración		Me gusta		Comentarios		Visualizaciones	
	Total	Promedio	Total	Promedio	Total	Promedio	Total	Promedio
Agência Lupa	25121	1092,22	224	9,74	74	3,22	3505	152,39
Aos Fatos	17913	1990,33	317	35,22	31	3,88	2074	230,44
Bolivia Verifica	25601	253,48	63	0,62	8	0,08	7430	73,56
Chequeado	12268	163,57	2047	27,29	555	7,40	52816	704,21
Colombiacheck	4784	683,43	144	20,57	9	1,29	2559	365,57
Cotejo Info	4392	81,33	14	0,26	0	0,00	1621	30,02
Ecuador Chequea	101583	1751,43	57	0,98	19	0,33	1616	27,86
Fast Check CL	3283	656,60	11	2,20	1	0,20	304	60,80
Mala Espina	166	166,00	0	0,00	0	0,00	7	7,00
Maldita.es	372463	1655,39	502	2,23	3	0,01	16570	73,64
Newtral	281716	1006,13	25990	93,15	8300	29,64	1276199	4557,85
TOTAL	849290	1013,47	29369	35,09	9000	10,75	1364701	1628,52

Por cada uno de los verificadores, se recogen a continuación los vídeos con más visualizaciones por canal:

Tabla 3. Agência Lupa

Título	Descripción	Tema	Compromiso	Me gusta	Comentarios	Visualizaciones
Lupa 5 anos: mais do que um convite, um compromisso com a reflexão.	No final de 2020, convidamos vocês, nossos leitores, a comemorar conosco os nossos 5 primeiros anos com muito questionamento. Encerradas as comemorações, seguimos em frente com um posicionamento ainda mais firme, ainda mais engajado com a checagem, com a educação midiática e com a formação livre e fundamentada da opinião.	Desinformación	0,178	6	10	554
Questões neurológicas e psicológicas sobre desinformação	Na próxima terça-feira (03), faremos uma live aqui no nosso canal no YouTube, às 17h, para responder algumas perguntas envolvendo psicologia e desinformação. Por exemplo: por que algumas pessoas são seduzidas mais facilmente por fake news que outras? A nossa mente está predisposta a alimentar certas crenças? O que são vieses inconscientes? Como a psicologia pode nos ajudar no combate à desinformação?	Desinformación	0,186	82	9	505
[REFLEXO] Episódio 2: desinformação e repactuação democrática	No segundo episódio do Reflexo, recebemos Marcos Nobre para falar sobre o impacto da desinformação na difícil tarefa de repactuação democrática de um país polarizado. Marcos é cientista social e filósofo, professor de Filosofia Política da Unicamp.	Desinformación	0,157	26	8	470

Bastidores das Eleições 2020 - Ítalo Rômany	Neste vídeo, o repórter Ítalo Rômany fala sobre a importância da transparência dos dados no debate público, citando um caso que ocorreu durante as eleições de 2020.	Actualidad y política	0,108	8	0	338
Bastidores das Eleições 2020	Neste vídeo, nossa diretora de conteúdo, Natália Leal, conta como foi sua experiência pela primeira vez nesse cargo durante a cobertura das eleições municipais de 2020.	Actualidad y política	0,063	2	0	202

Las publicaciones en YouTube de Agência Lupa con mayor engagement giran en torno a la educación mediática como medio para combatir la desinformación. A pesar de que son las que más han destacado en el período de la muestra, el índice de compromiso es muy bajo, y no crean conversación de acuerdo con los principios establecidos por Kent & Taylor (2002), no mantienen el bucle dialógico ni generan visitas reiteradas, aunque si mantienen el principio de información útil para los usuarios.

Tabla 4: Aos Fatos

Título	Descripción	Tema	Compromiso	Me gusta	Comentarios	Visualizaciones
Os desafios na nova fase da pandemia - AOS FATOS NO AR #8	Mesmo com o avanço da vacinação e a queda do número de casos de Covid-19, a desinformação sobre a pandemia persiste e até se sofisticada. Nesta edição do Aos Fatos NO AR, nosso chefe de reportagem, Leonardo Cazes, recebe o epidemiologista e professor da UFPel (Universidade Federal de Pelotas) Pedro Hallal	COVID-19	0,241	46	4	405
Como sobreviver à infodemia - AOS FATOS NO AR #1	Na live comemorativa dos seis anos do Aos Fatos, nossa diretora-executiva, Tai Nalon, conversa com Natália Leal, diretora-executiva da agência Lupa, Daniel Bramatti, editor do Estadão Verifica, e Sérgio Lüdtke, editor do projeto Comprova.	COVID-19	0,224	58		366

<p>Ataque às urnas e desinformação eleitoral - AOS FATOS NO AR #3</p>	<p>Na terceira edição da série de conversas Aos Fatos NO AR, nossa diretora-executiva, Tai Nalon, recebe a secretária-geral do TSE (Tribunal Superior Eleitoral), Aline Osorio, para discutir os recentes ataques às urnas eletrônicas e as campanhas de desinformação que já cercam as próximas eleições.</p>	<p>Actualidad y política</p>	<p>0,187</p>	<p>34</p>	<p>12</p>	<p>308</p>
<p>Robôs contra a desinformação - AOS FATOS NO AR #4</p>	<p>Na quarta edição do Aos Fatos NO AR, a editora do Radar Aos Fatos, Débora Ely, conversa com Maria Luiza Mondelli, cientista de dados do ITS responsável pelo Pegabot, e Eduardo Cuducos, cofundador da Rosie da Serenata sobre o uso de robôs no combate à desinformação. No começo do mês, o Twitter impediu o funcionamento da robô checadora do Aos Fatos, a Fátima.</p>	<p>Desinformación</p>	<p>0,139</p>	<p>37</p>	<p>2</p>	<p>224</p>
<p>Quando a comunicação do governo desinforma - AOS FATOS NO AR #5</p>	<p>A comunicação é fundamental para que um governo funcione bem. Mas e quando a desinformação parte de fontes oficiais? É sobre o que conversam Thomas Traumann e nossa diretora-executiva, Tai Nalon, na quinta edição do Aos Fatos NO AR.</p>	<p>Actualidad y política</p>	<p>0,133</p>	<p>32</p>	<p>5</p>	<p>215</p>

Las publicaciones con mayor engagement en el verificador Aos Fatos giran en torno a la educación desinformación en el ámbito político a pesar de que en la categoría de YouTube aparece clasificada como “entretenimiento”. Al igual que en el caso anterior, el índice de compromiso es muy bajo, y no crean conversación de acuerdo con los principios establecidos por Kent & Taylor (2002), no se mantiene el bucle dilógico ni se generan visitas reiteradas, aunque si se mantiene el principio de información útil para los usuarios.


Tabla 5: Bolivia Verifica

Título	Descripción	Tema	Compromiso	Me gusta	Comentarios	Visualizaciones
Video de personas orando en Brasil no es actual, como asegura Bolivisión		Religión	15,113	34	5	2243
Es verdad que repartieron fichas en marcha de desagravio de la Wiphala en Santa Cruz	Bolivia Verifica accedió a una grabación que muestra que se repartieron fichas en el frontis de la Gobernación	Actualidad y política	8,258	0	0	1247
¿Es efectiva la vacuna contra la variante delta y otras que están apareciendo?	Esta es una duda que te responderemos en este podcast con información brindada por la Organización Panamericana de la Salud (OPS).	COVID-19	5,457	0	0	824
Ninguna institución gubernamental esta regalando premios por WhatsApp ¡Cuidado con las estafas!	Ingresar a la verificación: https://boliviaverifica.bo/utilizar-el-nombre-del-presidente-luis-arce-para-estafar-mediante-whatsapp/	Actualidad y política	1,974	0	0	298
¿Cómo encontrar un tuit borrado?	Una herramienta digital gratuita permite almacenar copias de páginas web o de redes sociales, estas están disponibles a lo largo del tiempo y no pueden ser modificadas ni eliminadas.	Redes sociales	1,351	2	0	202

En este caso, las publicaciones con mayor engagement son de diversa temática –redes sociales, desinformación, política, COVID-19. Hay que señalar que el índice de compromiso adquirido es muy alto, pero es resultado de un número de suscriptores muy bajo, lo que provoca que la ecuación aumente el grado de engagement registrado. A pesar de ello, se sigue sin crear conversación de acuerdo a los principios establecidos por Kent & Taylor (2002): no se mantiene el bucle dialógico ni se generan visitas reiteradas, aunque si se mantiene el principio de información útil para los usuarios.

Tabla 6: Chequeado

Título	Descripción	Tema	Compromiso	Me gusta	Comentarios	Visualizaciones
Las desinformaciones de Ivana Nadal	Es falso que el uso de barbijos provoque que inhalemos dióxido de carbono y nos enfermemos,	Desinformación	2,717	47	25	11039

	como dijo Ivana Nadal.					
Quiénes son los "Médicos por la Verdad" que difunden desinformaciones sobre el coronavirus	Un grupo de médicos se ha dedicado a desinformar durante la pandemia. Se trata de una organización internacional que nació en Alemania DE, se fortaleció en España ES y se expandió por América Latina. Las falsedades que difunden van desde promover falsas curas, llamar a no usar mascarillas y hasta negar la pandemia, por ser parte de un supuesto "plan de dominación global".	COVID-19	1,801	54	316	6996
Coronavirus: qué es y cómo funciona la INMUNIDAD DE REBAÑO. #InfodelaBuena + Chequeado	La inmunidad de rebaño es la protección indirecta que las personas inmunes a una enfermedad brindan a quienes no lo son. ¿Cómo funciona? Si 1 persona tiene un virus respiratorio y trabaja con 10 personas más en un ambiente cerrado, es muy probable que se contagien. Si esas personas viven con un promedio de 3 personas más, en poco tiempo 1 caso se convierte en 40.	COVID-19	1,568	370	29	6014
 Viaje a la mente de un anticiencia - Chequeado + #InfodelaBuena	¿Por qué hay personas se niegan a aceptar información y datos objetivos que son contrarios a sus ideas previas? Existe un fenómeno llamado "efecto Dunning-	Educación	1,492	473	31	5598

	Kruger”, que dice que hay personas que cuanto más confían en sus conocimientos y creencias sobre un tema, menos saben objetivamente sobre él					
🗣️ ¿Por qué ventilar funciona para combatir al coronavirus? #IDLB	Fabrizio Ballarini, científico del CONICET, explica cómo ventilar los espacios puede ayudarnos a combatir el coronavirus. ¿Sabías que cuando una persona infectada tose, estornuda o respira, miles de gotitas de saliva invaden el aire; igual que si apretaras un aerosol?	COVID-19	0,801	220	7	3048

Las publicaciones con mayor engagement de Checkeado giran en torno a la COVID-19. Hay que señalar que el índice de compromiso adquirido es bastante alto respecto a su número de suscriptores., En este caso, el verificador Checkeado si crea conversación de acuerdo con los principios establecidos por Kent & Taylor (2002) manteniendo el bucle dialógico y generando visitas reiteradas, así como información útil para los usuarios.

Tabla 7: Colombia Check

Título	Descripción	Tema	Compromiso	Me gusta	Comentarios	Visualizaciones
Chequeo a desinformaciones sobre las variantes del coronavirus - #VerifiquenVagos Colombiacheck	Estos y más chequeos en https://colombiacheck.com Suscríbete	COVID-19	1,036	10	0	947
Vacunas Covid-19: Eficacia y efectos - #VerifiquenVagos Colombiacheck	Para ampliar los temas tratados en este video: ¿Son seguras las vacunas del COVID-19? Cuáles son y cómo funcionan los tipos de vacunas para el COVID-19 Estos y más chequeos en nuestra web	COVID-19	0,459	13	4	407

Desinformaciones luego de 5 años del plebiscito por la paz #VerifiquenVagos Colombiacheck	Estos y más chequeos en https://colombiacheck.com Suscríbete	Actualidad y política	0,439	44	4	358
Migración venezolana y desinformación - #VerifiquenVagos Colombiacheck	Estos y más chequeos en https://colombiacheck.com Suscríbete	Actualidad y política	0,339	25	0	288
Premios Donald a lo más absurdo y divertido de 2021 #VerifiquenVagos Colombiacheck	Pese a ser un año marcado por la pandemia y el confinamiento, en el 2020 no hicieron falta en Colombiacheck las verificaciones a temas absurdos, desconcertantes y divertidos. Aquí nuestra primera entrega de los 'Premios Donald'.	Otros	0,320	24	1	271

En este caso, las publicaciones con mayor engagement giran en torno a la desinformación, y COVID-19. El índice de compromiso adquirido es bajo y se sigue sin crear conversación de acuerdo con los principios establecidos por Kent & Taylor (2002): no se mantiene el bucle dialógico ni se generan visitas reiteradas, aunque sí se mantiene el principio de información útil para los usuarios.

Tabla 8: Cotejo.info

Título	Descripción	Tema	Compromiso	Me gusta	Comentarios	Visualizaciones
Peso colombiano domina en economía de Táchira desde 2018	Testimonios de ciudadanos y comerciantes del estado Táchira revelan que el uso del bolívar quedó prácticamente desechado. La periodista @yamilejimenez nos ofrece detalles de uno de sus más recientes trabajos para #CotejoInfo	Economía	14,390	6	0	1318
La vida después de la COVID-19 COTEJO	La experiencia vivida por los sobrevivientes de la variante del coronavirus que produce la COVID-19 está cargada de una innumerable cantidad de relatos, anécdotas y testimonios de lo que implica este padecimiento en los ámbitos personal, familiar, social, laboral y médico.	COVID-19	0,391	0	0	36

#LupaPeriodística Sueldo de médicos en Venezuela cayó 98,15 % en 7 años	Un especialista gana entre 2,32 y 3,96 dólares mensuales en los centros de salud pública venezolanos, mientras que el salario de un médico colombiano es de unos 921 dólares Valentina Saldivia	Actualidad y política	0,283	1	0	25
Freddy Bernal: “A partir de hoy tenemos Aeropuerto Internacional de Santo Domingo”	La periodista Yamile Jiménez ofrece detalles de su más reciente chequeo periodístico para #CotejoInfo www.cotejo.info	Actualidad y política	0,207	0	0	19
#LupaPeriodística Producción petrolera de Venezuela disminuyó 45 % en 2020	#Venezuela está lejos de ser la potencia petrolera de otrora. @mvsaldiviat ofrece detalles en el siguiente video #CotejoInfo	Actualidad y política	0,196	1	0	17

Las publicaciones con mayor engagement de Cotejo.info son de diversa temática –economía, política general, COVID-19. El índice de compromiso adquirido es bajo a excepción de la publicación “Peso colombiano domina en economía de Táchira desde 2018” que alcanza un número de visualizaciones que llega al millar, cifra pocas veces alcanzada por los vídeos de su canal de YouTube. De nuevo, no se crea conversación, no se mantiene el bucle dialógico ni se generan visitas reiteradas, aunque si se mantiene el principio de información útil para los usuarios.

Tabla 9: Ecuador Chequea

Título	Descripción	Tema	Compromiso	Me gusta	Comentarios	Visualizaciones
¿Cómo actúan los troll center?	Programa de análisis para conocer cómo actúan los troll center, cuál es su objetivo, cómo funcionan y desde cuando surgieron.	Redes Sociales	0,207	4	2	272
La propaganda negra en las campañas electorales	¿Qué es la propaganda negra? ¿Cómo funciona? Hay varias estrategias de manipulación política en tiempo electoral. ¿Cómo podemos identificarlas los ciudadanos?	Actualidad y política	0,121	5	1	156
Estrategias políticas en Tik Tok	¿Cómo se ha utilizado esta nueva red social en la campaña electoral y qué esperar para la segunda vuelta? ¿Se ha convertido también en	Redes sociales y Actualidad y política	0,116	2	0	153

	una fuente de desinformación?					
Dióxido de cloro y COVID-19	La verdad acerca del dióxido de cloro y nuevos hallazgos sobre sus efectos.	COVID-19	0,075	4	14	82
Redes Sociales y campañas electorales	Primer diálogo con enfoque académico sobre desinformación con miembros de la coalición Ecuador Verifica.	Desinformación	0,043	4	0	53

De nuevo, las publicaciones con mayor engagement son de diversa temática –redes sociales, desinformación, política general, COVID-19. Hay que señalar que el índice de compromiso adquirido es bajo, y se sigue sin crear conversación de acuerdo con los principios dialógicos: no se mantiene el bucle dialógico ni se generan visitas reiteradas, aunque si se mantiene el principio de información útil para los usuarios.

Tabla 10: Fast Check CL

Título	Descripción	Tema	Compromiso	Me gusta	Comentarios	Visualizaciones
Seminario "Fake News" en redes sociales y defensa de la democracia	Fast Check CL participó del Seminario "Fake News" en redes sociales y defensa de la democracia, organizado por el Consejo para la Transparencia y Mega Plus. En la oportunidad participaron diferentes representantes del gobierno.	Redes sociales y desinformación	1,009	3	0	108
Apertura de la sala de resguardo de los votos Colegio Marcela Paz La Florida	Gracias a Luis Gangas	Actualidad y política	0,773	4	0	81
Presidente Piñera sobre Pandora Pappers - Punto de prensa 4 de octubre		Actualidad y política	0,445	1	0	48
Guía Elecciones 2021: Consejos prácticos antes de ir a votar	Toda la información de este video y los enlaces que te pueden ayudar se encuentran disponibles en la siguiente publicación: - https://www.fastcheck.cl/2021/05/10/guia-elecciones-2021-que-debes-saber-y-	Actualidad y política	0,427	3	0	44

	preparar-antes-de-ir-a-votar-en-la-super-eleccion-del-sabado-y-domingo/					
Sala de reuniones personales de Fabián Padilla		Actualidad y política	0,218	0	1	23

De nuevo, las publicaciones con mayor engagement giran en torno a política general y COVID-19. El índice de compromiso adquirido es bajo, y se sigue sin crear conversación de acuerdo con los principios dialógicos: no se mantiene el bucle dialógico ni se generan visitas reiteradas, aunque si se mantiene el principio de información útil para los usuarios.

Tabla 11: Mala Espina

Título	Descripción	Clasificación temática	Compromiso	Me gusta	Comentarios	Visualizaciones
Convención Constitucional: Presupuesto y probidad	Este 04 de julio se realizará la primera sesión de la Convención Constitucional. María Jaraquemada, abogada y oficial de Programa para Chile IDEA Internacional, nos explica los desafíos que se presentan previos a la redacción del reglamento.	Actualidad y política	0,012	0	0	7

En el caso de Mala Espina Check, solo se ha registrado un vídeo en su canal de YouTube durante 2021, con escasas visualizaciones y, por lo tanto, con un registro nulo de reacciones y consecuentemente de compromiso. A pesar de que, si es información de estricta actualidad, los principios dialógicos no se pueden establecer debido a que no existe actividad en la red social.

Tabla 12: Maldita.es

Título	Descripción	Clasificación temática	Compromiso	Me gusta	Comentarios	Visualizaciones
#MalditoCambioClimático: ¿por qué estamos tan seguros de que sí existe?	El #MalditoCambioClimático es una realidad, está pasando ahora mismo, pero... ¿cómo lo sabemos? Porque hay datos: te contamos cuáles son y las conclusiones que se sacan de ellos en el primer episodio.	Cambio climático	0,366	56	0	1269

Por qué las vacunas contra la COVID-19 no nos transmiten "propiedades magnéticas"	Para 'demostrar' que el contenido de los vídeos por los que nos habéis preguntado no es científicamente posible y que una vacuna no tiene la capacidad de hacernos 'magnéticos', Nájera propone cuatro experimentos caseros que muestran qué sucede realmente entre un imán y diferentes tipos de metal.	COVID-19		8	0	1005
#MalditoCambioClimatico: ¿cómo sabemos que la humanidad lo está provocando?	El planeta está más caliente ahora que hace 200 años. ¿El efecto invernadero tiene algo que ver? Si aún eres escéptico, te contamos varias claves que demuestran que el #MalditoCambioClimático lo ha producido el ser humano y cómo estamos tan seguros de lo que dicen los datos en nuestro segundo episodio.	Cambio climático	0,206	29	0	715
La izquierda y el rojipardismo		Actualidad y política	0,190	10	1	676
Por qué las vacunas contra la COVID-19 no nos transmiten "propiedades magnéticas"	Para 'demostrar' que el contenido de los vídeos por los que nos habéis preguntado no es científicamente posible y que una vacuna no tiene la capacidad de hacernos 'magnéticos', Nájera propone cuatro sencillos experimentos caseros que muestran qué sucede realmente entre un imán y diferentes tipos de metal.	COVID-19	0,153	56	0	1269

Las publicaciones con mayor engagement de Maldita.es en el período de la muestra giran en torno a la COVID-19 y el cambio climático. Hay que señalar que el índice de compromiso adquirido es bastante bajo respecto a su número de suscriptores. En este caso, el verificador no crea conversación de acuerdo con los principios establecidos por Kent & Taylor (2002), no se mantiene el bucle dialógico y tampoco genera visitas reiteradas.

Tabla 13: Newtral

Título	Descripción	Clasificación temática	Duración	Me gusta	Comentarios	Visualizaciones
Newtral y Google se unen para luchar contra los bulos	A la alianza contra los bulos de Newtral y Google se suma Rocío Vidal, la divulgadora y periodista conocida como La Gata de Schrödinger. En Newtral somos periodismo, tecnología y datos. Contamos historias que importan, desmentimos noticias falsas y hacemos fact-checking. Síguenos en redes	Actualidad y política	12,747	779	1211	252951
#VacúnateContraLosBulos Cinco claves para desmentir noticias falsas.	¿Te están llegando mensajes alarmistas por redes sociales? ¿Crees que son mentira pero no sabes cómo comprobarlo? En este vídeo de What The Fake! #VacúnateContraLosBulos te explicamos las cinco claves que puedes seguir para desmentir las llamadas "noticias falsas". En Newtral somos periodismo, tecnología y datos.	Desinformación y Redes sociales	12,738	1034	1102	252618
Qué es el Metaverso: una introducción al futuro de internet	La definición de qué es el metaverso sigue siendo algo difusa incluso para los mayores expertos, pero hay al menos cuatro conceptos que sirven para empezar a imaginar cómo será el futuro de internet, o de nuestras vidas digitales, en las próximas décadas.	Redes sociales	5,876	3549	308	95994
#VacúnateContraLosBulos Cómo identificar audios falsos que llegan al móvil.	¿Cómo podemos saber si los audios que recibimos en el teléfono móvil son verdad o mentira? Por ejemplo, aunque parezcan más reales porque están protagonizados por personas, desconfía si tratan de convencerte de algo sin aportar pruebas. En este vídeo de What The Fake!	Desinformación y Redes sociales	4,837	453	508	95777
Por qué Estados Unidos protege a Israel en plena crisis humanitaria en Gaza	La administración de Joe Biden se ha mostrado especialmente tímida esta semana con los acontecimientos en Oriente Próximo, donde los ataques de cohetes de Hamas y los bombardeos de Israel contra la Franja de Gaza se han saldado con centenares de civiles	Actualidad y política	3,094	1639	665	59580

	muertos, especialmente del lado palestino. Pero por qué Estados Unidos sigue protegiendo a Israel en plena crisis humanitaria en Gaza.					
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Las publicaciones con mayor engagement de Newtral giran en torno a la desinformación. Hay que señalar que el índice de compromiso adquirido es muy alto respecto a su número de suscriptores, así como el número de visualizaciones por vídeo. En este caso, el verificador Newtral si crea conversación de acuerdo con los principios establecidos por Kent & Taylor (2002) manteniendo el bucle dialógico y generando visitas reiteradas, así como información útil para los usuarios.

Teniendo en cuenta estos datos y en base a las categorías antes establecidas, los verificadores que han obtenido mayor número de visualizaciones en YouTube en el año 2021 han sido Newtral (756.920 visualizaciones) y Chequeado (32.695 visualizaciones); mientras que los demás verificadores no alcanzan estas cifras: Bolivia Verifica (4.814), Maldita.es (4.215), Colombiacheck (2.271), Agência Lupa (2.069), Aos Fatos (1.518), Cotejo.info (1.415), Ecuador Chequea (716), Fast Check CL (304), Mala Espina (7).

En cuanto a los vídeos más comentados, Newtral consigue que 4 de sus vídeos se sitúen entre los más comentados con “Newtral y Google se unen para luchar contra los bulos”, “#VacúnateContraLosBulos | Cinco claves para desmentir noticias falsas”, “Por qué Estados Unidos protege a Israel en plena crisis humanitaria en Gaza” y “#VacúnateContraLosBulos | Cómo identificar audios falsos que llegan al móvil”, seguido por el de Chequeados “Quiénes son los “Médicos por la Verdad” que difunden desinformaciones sobre el coronavirus”.

En lo que se refiere a los vídeos que más han suscitado el like de los usuarios, coinciden los verificadores Newtral con “Qué es el Metaverso: una introducción al futuro de internet”, “Por qué Estados Unidos protege a Israel en plena crisis humanitaria en Gaza”, “#VacúnateContraLosBulos | Cinco claves para desmentir noticias falsas”, “Newtral y Google se unen para luchar contra los bulos”; junto a Chequeados con “Viaje a la mente de un anticiencia - Chequeado + #InfodelaBuena”.

Los datos recabados sitúan a los vídeos de los canales de Newtral, Chequeados, Agencia Lupa y Maldita en torno a un 0.8% y un 0.5% de engagement acumulado, mientras que Bolivia Verifica, Cotejo.info y Mala Espina no llegan apenas al 0.1%.

En cuanto a la clasificación temática teniendo en cuenta las categorías establecidas en la red social YouTube, hay que señalar que entre los vídeos que han generado mayor engagement en el período de la muestra predominan aquellos que giran alrededor de la temática de verificación de noticias relativas al COVID-19, la actualidad de los países propios de los verificadores, así como vídeos relativos a cómo diferenciar noticias verdaderas de bulos. Los comentarios que los usuarios han compartido en la propia red social son escasos, reforzando la hipótesis de que el diálogo y conversación de los contenidos volcados por los distintos canales es inexistente. A pesar de ello, todos los verificadores emplean los principios dialógicos básicos establecidos por (Kent & Taylor, 2002) -

información útil, generación de visitas reiteradas y mantenimiento del bucle dialógico-, pues se detecta principalmente la presencia de enlaces a las diferentes redes sociales de los verificadores, así como a las propias web, consiguiendo el mantenimiento de las visitas reiteradas al conjunto de social media de cada uno de los perfiles (exceptuando el caso de Mala Espina). Por otro lado, todos los perfiles incorporan en sus publicaciones como palabra clave el propio nombre del verificador, facilitando la tarea realizada por los motores de búsqueda online.

7. Conclusiones

Esta investigación ha permitido arrojar luz sobre el uso de YouTube por parte de los fact-checkers iberoamericanos. Al ser objeto de análisis una de las plataformas más utilizadas para acceder a contenidos de carácter informativo y una de las redes sociales en las que se propaga más desinformación, resulta imprescindible que la presencia de los fact-checkers garantice que los contenidos verificados lleguen al mayor número de personas posible y que estas respondan o interactúen con dichos contenidos.

El análisis realizado muestra que los fact-checkers utilizan YouTube como una plataforma que sirve de altavoz a sus páginas web. Esto les sirve como ampliación de sus editoriales y generando contenidos en vídeo adaptados a las características de esta red social. De todos modos, también se puede observar que sus vídeos no fidelizan a los usuarios, solo completan la información publicada en otros canales externos, sin pretensión alguna de que las audiencias realicen ningún tipo de participación o interacción, más allá de la lectura de las propias informaciones comunicadas.

Este estudio también ha constatado la heterogeneidad existente entre las entidades de verificación en lo referente a la gestión de sus cuentas de YouTube. Del mismo modo que se indicaba en Ramahí-García et al. (2021) se han observado grandes diferencias en lo relativo a los niveles de publicación, visualizaciones y engagement que reciben los fact-checkers iberoamericanos en sus vídeos. En este sentido, las cuentas de Chequeado, Maldita.es y Newtral parecen consolidadas en la plataforma al presentar niveles de visualizaciones, suscriptores y publicaciones más elevados, mientras que el resto de los verificadores se sitúan en un punto en la que deben crecer y evolucionar para alcanzar puntos similares.

Pese a la heterogeneidad mencionada, se comprueba la falta de interés generalizada por parte de la audiencia para participar en la conversación. Apenas existe conversación más allá de lo banal y la puesta en duda de los contenidos que se encuentran en el universo web. En este sentido, la propia desinformación continúa siendo más compartida por los usuarios que los propios desmentidos, por lo que los fact-checkers deberán optimizar su estrategia de contenidos en YouTube para poder dar respuesta en el futuro a esta problemática.

Por otra parte, se ha observado que son los vídeos de actualidad, como los relacionados con la pandemia provocada por la COVID-19 -como señalaron investigaciones de Rúas Araújo et al., (2021), las informaciones relativas a fuentes oficiales o gubernamentales, el propio proceso de fact-checking y la política, las temáticas de las que se generan más contenidos. Estos resultados discurren en

sintonía con el estudio de Máiz-Bar & Abuín-Penas (2022) al resaltar el lugar destacado que los contenidos relacionados con el coronavirus han ocupado en la comunicación de los verificadores.

En definitiva, y a la espera de nuevas aportaciones en este ámbito de estudio, se puede afirmar, que los fact-checkers todavía tienen un arduo camino por recorrer dentro de YouTube. El tipo de contenido audiovisual que generen será clave para atraer la atención de la audiencia y superar el alcance de la desinformación a la que tratan de combatir.

En este sentido, esta investigación es tan solo una introducción a la situación en la que se encuentran los verificadores iberoamericanos en YouTube. Se presenta como necesaria, por tanto, la ampliación y refutación de los resultados de este estudio mediante nuevas investigaciones que verifiquen los resultados obtenidos. Además, se recomienda, de cara a futuras investigaciones, analizar en profundidad la tipología del contenido que se publica en YouTube en comparación con otras redes sociales y también el estudio de fact-checkers de países anglosajones o de regiones diferentes a la iberoamericana.

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Emoções e interpretações: proposta de um artefacto educacional em média-arte digital

(Emotions and interpretations: proposal of an educational artifact in digital media art)

João Paulo Pinto
Centro de Investigação em Artes
e Comunicação (CIAC),
Universidade do Algarve, LE@D,
Universidade Aberta, Portugal.
joao.pinto@uab.pt
[0000-0002-8161-2513](tel:0000-0002-8161-2513)

Teresa Margarida Loureiro
Cardoso
Universidade Aberta, Laboratório
de Educação a Distância e
Elearning (LE@D), Portugal.
teresa.cardoso@uab.pt
[0000-0002-7918-2358](tel:0000-0002-7918-2358)

Ana Isabel Soares
Centro de Investigação em Artes
e Comunicação (CIAC),
Universidade do Algarve,
Portugal.
asoares@ualg.pt
[0000-0003-2324-8319](tel:0000-0003-2324-8319)

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Abstract

This text presents "Emotions to Scenes" as a digital media-art artefact for application in a school context. The goal is to reflect on the conflict of interpretations based on the images received and associated with emotions, testing the user's emotional positioning vis-à-vis those who share the same experience. Thus, it allows verification on whether each user's interpretation converges or diverges from that of other users. In an age as mediatic as the present, with moving images constantly received, and messages that incite the emotional sensitivity of the receptors, the artefact offers an experience on such visual stimuli. To this purpose, and after presenting the theoretical framework, we describe the design of the artefact, its creative design in digital media-art, the artistic installation process, the context of exhibition, including the contact with the public. Finally, we propose its application to the practices promoted within the scope of the Portuguese National Film Plan (PNC). We therefore consider that "Emotions to Scenes", although having its genesis in the digital media-art environment, can also be an educational artefact, namely as a didactic resource contributing to promote reflections in the context of media literacies in the light of current online practices and lifestyles.

Keywords: Digital media-art artefact, Emotions to Scenes, Portuguese National Film Plan, Media Literacy, Film Literacy, School Contexts

Resumo

Este texto apresenta o artefacto "Emotions to Scenes" como proposta em média-arte digital para aplicação em contexto escolar. O objetivo é refletir sobre o problema ou conflito das interpretações feitas sobre imagens recebidas e associadas às emoções, testando o posicionamento emocional dos utilizadores em relação a outros que usufruíram da mesma experiência. Permite, pois, verificar se a interpretação de cada um converge ou diverge da dos outros. Numa época tão mediática como a atual, na qual constantemente se recebem imagens em movimento com mensagens provocadoras da sensibilidade emocional dos recetores, o artefacto oferece uma experiência em torno de tais estímulos visuais. Para tal, e depois de apresentar o enquadramento teórico, descrevemos o design do Artefacto, a sua conceção criativa em média-arte digital, o processo de instalação artística e o contexto de exposição e contacto com o público. Por último, enunciamos a proposta de aplicação às práticas promovidas no âmbito do Plano Nacional de Cinema (PNC). Consideramos, por isso, que o "Emotions to Scenes", tendo a génese no ambiente da média-arte digital, também pode ser um artefacto educacional, enquanto recurso didático promotor de reflexões no quadro das literacias para os *media*, no contexto das atuais práticas e estilos de vida *online*.

Palavras-chave: Artefacto em média-arte digital, Emotions to Scenes, Plano Nacional de Cinema (PNC), Literacias para os media, Literacia fílmica, Contextos escolares

1. Introdução

Vivemos numa sociedade mediática. O nosso mundo está repleto de imagens portadoras de mensagens que provocam a sensibilidade emocional de cada indivíduo. Em qualquer lugar e momento, recebemos estímulos audiovisuais para interpretar, tomar decisões e/ou fazer despoletar outras ações. Como tal, as literacias mediáticas que cada um desenvolve, e os seus processos cognitivos e psicológicos, são fatores que determinam as emoções experienciadas. Damásio (1998) defende que as emoções formam parte da nossa vida racional e que são elas que permitem o equilíbrio das decisões, tanto no domínio pessoal como social. Assim, é importante ter consciência das emoções associadas a determinadas imagens e ser capaz de as comparar com as de outros recetores de idênticos estímulos visuais. Este exercício é interessante, não só para que cada indivíduo perceba quais as emoções que desencadeia, mas também para compreender como se situa no meio da multidão; isto é, para que saiba se e de que modo diverge ou converge dos outros que recebem dos media os mesmos estímulos mediáticos. Neste sentido, torna-se fundamental tomar consciência sobre os estados emocionais desencadeados perante as imagens fílmicas recebidas, processo mobilizador das novas literacias para os *media*, mas também de uma reflexão cognitiva.

Foi perante esta problemática que se considerou pertinente desenvolver o artefacto “Emotions to Scenes” (E2S)ⁱ. A sua génese parte do problema ou conflito da interpretação que fazemos das imagens que recebemos e do tipo de emoções que lhes associamos. Através do artefacto, o usufruidor poderá testar o posicionamento das suas emoções em relação à sociedade, simbolizada por todos os que o usufruam. Mas, ao permitir uma experiência em torno destes estímulos visuais, também contribui para a reflexão acerca das literacias para os *media*, nomeadamente no contexto dos atuais estilos e práticas de vida *online*.

Este texto começa por apresentar o artefacto como proposta de média-arte digital para aplicação nas atividades do Plano Nacional de Cinema (PNC). O objetivo é levar os alunos a refletirem sobre o problema ou o conflito da interpretação que fazem das imagens que recebem e de como as associam às emoções, testando o seu posicionamento em relação ao dos seus pares, simbolizados por todos os que também usufruam da experiência. Para tal, depois de se apresentar o enquadramento teórico, descrevemos o desenho do Artefacto, a respetiva conceção criativa em média-arte digital, o processo de instalação artística e o contexto de exibição e de contacto com o público. Apresentamos, ainda, a avaliação do *feedback* recolhido durante a exibição, de modo a ponderar acerca da sua contribuição para a melhoria do artefacto. Finalmente, enunciamos a proposta de aplicação às práticas desenvolvidas no contexto do PNC.

2. Enquadramento teórico

A revolução tecnológica fez emergir um novo paradigma social, descrito por Castells (2011) como “sociedade em rede”. Está alicerçado no poder da informação, que permite ligar todos os indivíduos à escala mundial, e que confere novos significados aos conceitos de tempo e de espaço, transformando a forma de comunicar e de perceber a realidade. Os novos dispositivos de comunicação utilizados quotidianamente (computador, *tablets*, *smartphones*, entre outros),

alteraram a forma como se vivencia o audiovisual e constituem novas plataformas de mediação da comunicação através da *internet* e de redes sociais *online* (Reia-Baptista, 2006). Cada um de nós é, cada vez mais, um ser digital – vivemos embrenhados num mundo *online*, incorporando multidões e aglomerações virtuais.

Apesar de o comportamento humano ter passado a ser mediado pelas tecnologias digitais, pode continuar a encontrar-se pontos em comum com o conceito de “homem-massa” proposto por Ortega y Gasset (2013) há 100 anos. O autor caracteriza-o como um indivíduo sem consciência de si mesmo, sem raízes, nem tradição – um ser sem características próprias; possui ideias, mas é incapaz de refletir sobre elas e de as contextualizar. Vive numa época de avanços científicos e tecnológicos extraordinários, embora constata-se que o mundo se tornou mais difícil e complexo, e que parece haver cada vez menos pessoas à altura de compreender tal complexidade e de enfrentar os desafios que lhe são colocados. Ainda para Ortega y Gasset, no mesmo texto, o maior problema social é o facto de o “homem-massa” não fazer o esforço de refletir e discutir acerca dos caminhos da sociedade, e continuar, em vez disso, a viver diluído numa multidão de anónimos, sentindo-se bem e sem angústias por ser igual aos outros.

No contexto do século XXI, o paradigma correspondente é o de uma sociedade em rede, mediada pelas tecnologias digitais, na qual as multidões digitais e *online* parecem encontrar um habitat propício aos tais “homens-massa”, conforme proposto pelo filósofo espanhol: seres despojados da sua própria história, da consciência de si, das suas raízes, do seu passado. Se se acrescentar a esta ausência de tempo, sintoma dos nossos dias, a sensação permanente de um futuro hipotecado (por exemplo, por falta de espaço, saúde, perspectiva), entende-se a ideia de Gumbrecht (2014) de um presente como que inflado, o único tempo, por assim dizer, (em) que se consegue imaginar. É a este cenário (de contornos mais ou menos pessimistas, mais ou menos esperançosos) que o artefacto desenvolvido se reporta e que convida a que cada um de nós se situe, e se posicione, no meio da multidão, tendo em conta a interpretação que faz dos conteúdos fílmicos e o modo como isso define as suas emoções. Assim, o artefacto pretende possibilitar ao usufruidor testar as suas emoções e identificar de que forma se situam em relação às dos outros e, conseqüentemente, às da multidão, dos “homens-massa”, enfim, da sociedade.

Segundo Costa (2018), o cinema desempenha um papel fundamental na consciencialização para o desenvolvimento, tanto ao nível do indivíduo como da sociedade, e tem “um carácter não só lúdico como também educativo, facilitando a progressão da sociedade e a consolidação de novos valores” (p. 130). A indústria cinematográfica continua a ser responsável pela maior parte das imagens que permanecem na memória dos indivíduos, isto é, pelos filmes ou cenas que se tornaram ícones de determinados momentos da vida de cada um, construtores de experiências significativas para o desenvolvimento socioafetivo dos indivíduos.

Se a arte for considerada uma forma de “comunicação de emoções” (Depardieu & Martin, 2018, 20:49) e o cinema uma arte suprema, classificada como 7.^a arte (Canudo, 1924, p. 3), podemos extrapolar que o cinema é uma forma suprema de comunicar emoções. É neste sentido que julgamos essencial uma tomada de consciência sobre os estados emocionais

desencadeados perante as imagens fílmicas que cada indivíduo recebe, dado que se trata de um processo potencialmente mobilizador de novas literacias para os media, mas também de uma reflexão cognitiva acerca de si mesmo e do lugar que ocupa em relação com os outros indivíduos, infinitos pontos nesta rede social em que coabitamos. É, portanto, essencial refletir sobre as emoções que se associam a determinadas imagens, comparando-as com as emoções de outros como nós e em contextos semelhantes. Foi esta inquietação que esteve na génese do artefacto e que motivou a sua pergunta de partida, a saber: qual é o posicionamento das emoções do indivíduo em relação às de outros que visualizam as mesmas imagens?

Numa época tão mediática como aquela em que vivemos, repleta de imagens em movimento, portadoras de mensagens que permanentemente instigam em cada indivíduo a sua sensibilidade emocional, o artefacto E2S permite uma experiência em torno das emoções; do mesmo modo, permite comparar como a interpretação que fazemos se enquadra relativamente às dos outros. Mas pretende também ser um contributo para que o usufruidor tome consciência de como se posiciona socioemocionalmente, de forma a melhorar a sua cidadania.

3. O desenho

No plano físico, o artefacto E2S é composto pelos seguintes elementos: um livro transformado para incorporar um *tablet*, um *Hotspot WIFI* e o *smartphone* do usufruidor. No plano não físico, digital, o artefacto integra um vídeo e um questionário *online* disponibilizado através da *internet*. É este conjunto de elementos que se apresenta na Figura 1.

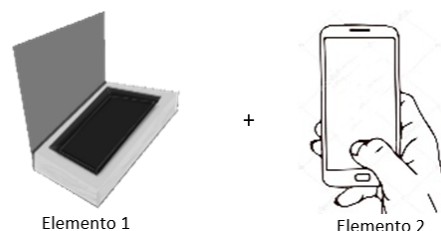


Figura 1 – Artefacto “Emotions to Scenes”

O Elemento 1 do artefacto representa um livro, de grandes dimensõesⁱⁱ, exposto ao público, aberto, devidamente adaptado, de forma a integrar os componentes tecnológicos do artefacto e, por outro lado, criar o contexto físico da experiência. No interior das folhas deste livro, foram criadas concavidades para inserir o *tablet* (encaixado, de forma a que apenas o ecrã fique visível) e o referido *Hotspot WIFI* (oculto num orifício no interior do livro), conforme mostra a Figura 2.

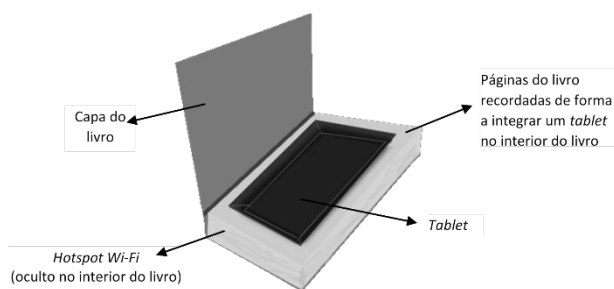


Figura 2 – Simulação do Elemento 1

Encaixado nas suas páginas (do lado ímpar), está um *tablet* com um vídeo em reprodução contínua (*loop*), de um excerto de uma cena do filme *Dead Poets Society* – O Clube dos Poetas Mortos (Weir, 1998), como é exemplificado na Figura 3.



Figura 3 - Elemento 1

Optámos por este filme porque entendemos que é um dos mais paradigmáticos da década de 1980 e porque suscita a identificação dos espectadores jovens com a narrativa. Nele conta-se a história de um professor que utiliza métodos pedagógicos revolucionários e pouco ortodoxos nas suas aulas de Literatura Inglesa. Trata-se de um filme visionado em muitas das escolas participantes no PNC e perspetiva-se que em breve seja incluído na lista de filmes de referência daquele Planoⁱⁱⁱ. A cena selecionada para ser visualizada no artefacto representa o momento em que o professor incentiva os alunos a rasgarem as páginas do livro-base da disciplina e a utilizarem como lema de vida o mote *carpe diem*, a ideia de aproveitar e viver o dia presente na sua máxima manifestação, no aqui e no agora, *hic et nunc*, por ser a vida demasiado curta para se ficar retido no passado ou em projeções futuras. Quando visualizadas de forma isolada, sem som, nem contexto narrativo, as imagens dessa cena podem ter interpretações diferentes, passíveis de provocar emoções desenquadradas da narrativa original, e até opostas. Sendo uma das mais emblemáticas do filme, a cena necessitou de algum tratamento gráfico para melhorar a qualidade de imagem e o formato, de modo a possibilitar a visualização na vertical, posição em que o *tablet* é disposto. Atendendo à duração do plano utilizado, esse uso não infringe as orientações relativas aos direitos de autor. O vídeo integra um código QR (código de resposta rápida, ou *Quick Response*), que, lido através do *smartphone* do usufruidor (Elemento 2), remete

automaticamente para o endereço que disponibiliza o questionário *online*. Neste surge uma única pergunta, à qual o utilizador deverá responder, seleccionando uma opção. Esta resposta representa uma emoção a associar à interpretação das imagens do vídeo. Depois de submetida a resposta, são visualizados, também no *smartphone*, os resultados das respostas de todas as pessoas que até àquele momento usufruíram do artefacto e que responderam anteriormente ao mesmo questionário. O usufruidor é então convidado a refletir sobre o posicionamento da sua resposta perante as dos outros. Além do *tablet*, como referido, o livro integra um *Hotspot WIFI*, para disponibilizar acesso gratuito à *internet*, útil no caso de o usufruidor não dispor dele, e, assim, garantir o uso do artefacto na sua plenitude.

No caso do Elemento 2, representado na Figura 4, este é composto pelo *smartphone* do usufruidor, sendo a parte digital implementada num serviço *web* de questionários *online*. O uso de um equipamento seu, alheio à propriedade do ambiente de exposição do artefacto, dá ao usufruidor o poder de utilizar um dispositivo próprio para vivenciar a experiência pretendida. A tomada de decisão e a interação são realizadas num ambiente tecnológico familiar ao usufruidor, num espaço que este domina, que é seu, e onde se sente confortável.

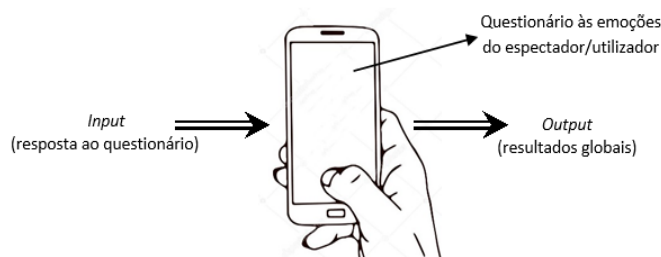


Figura 4 - Simulação do Elemento 2

Para que o Elemento 2 funcione tal como é esperado, basta que cada usufruidor tenha um simples *smartphone*, com algumas características tidas como frequentes hoje em dia em equipamentos deste tipo, sendo as mais importantes as possibilidades de acesso à *internet* e de leitura de códigos QR. No caso do acesso à *internet*, o Elemento 1 do artefacto disponibiliza, como explicitado, um *Hotspot WIFI* com acesso gratuito.

Pretende-se, numa primeira fase, que o artefacto provoque uma vivência emocional no próprio usufruidor, convidando-o a mobilizar as suas perceções emocionais acerca dos conteúdos visuais recebidos. Numa segunda fase, é-lhe pedido que exteriorize essas emoções, declarando-as. No fim, é esperado que o usufruidor faça como que um diagnóstico da sua perceção emocional em comparação com as de outros, e, assim, tome consciência do posicionamento das suas emoções perante as dos demais usufruidores, ou seja, face às da multidão, da “massa”. Em última instância, poderá considerar-se que o artefacto instiga o usufruidor a situar-se já não no meio da multidão, acriticamente, mas a refletir sobre ela, posicionando-se em relação à demais sociedade.

A utilização plena do artefacto consiste na realização completa da sequência das experiências previstas, conforme indicado na Figura 5.

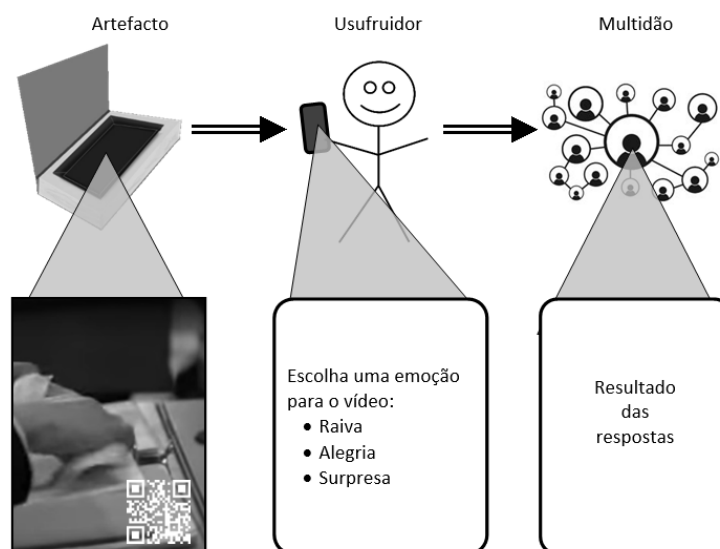


Figura 5 - Simulação do contexto de utilização

Sistematizando, a utilização correspondente ao antecipado, que classificamos como de usufruição plena, é aquela em que o usufruidor começa por se aproximar do artefacto e visualiza o vídeo. Com o seu *smartphone*, faz a leitura do código QR presente no vídeo e acede à pergunta *online*, escolhendo a opção que melhor se identifica com a que corresponde ao que sente ao visualizar o vídeo. Depois, ainda no *smartphone*, poderá visualizar o resultado das respostas dos anteriores participantes. No fim, o usufruidor será convidado a refletir sobre o posicionamento da sua perceção acerca do vídeo em relação às emoções dos outros usufruidores. As figuras 6 e 7 ilustram a aparência final do artefacto.

A criação em média-arte digital, assim como noutras formas de arte, é um processo de construção que envolve custos financeiros consideráveis, o que se torna num constrangimento ao próprio processo criativo. Assim, por vezes, é essencial o estabelecimento de uma rede de colaboração, principalmente com instituições, de forma a conjugar interesses e contribuições para responder a necessidades, quer a nível da criação e desenvolvimento do artefacto, quer na tentativa de redução dos custos. Neste sentido, o desenho do E2S envolveu a colaboração de várias entidades, cada uma contribuindo com produtos/serviços. Evitou-se o recurso à figura de patrocinadores, para salvaguardar questões éticas e morais relacionadas com sugestões comerciais em recursos e espaços educativos. Assim, adotámos o termo de mecenas para designar as entidades parceiras do processo de construção do artefacto, tal como mostra a Tabela 1 (por ordem alfabética).

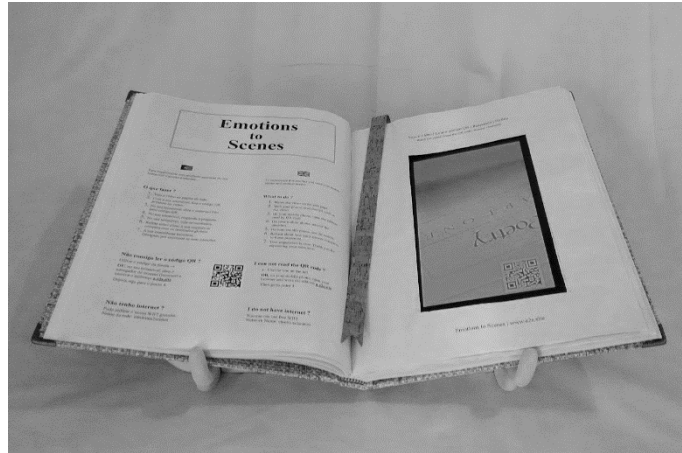


Figura 6 - Aparência final do artefacto (frente)



Figura 7 - Aparência final do artefacto (lateral)

Tabela 1 - Mecenias

Mecenas	Tipo de atividade	Contribuição
CC Local Point - DÍNAMO10	Hub criativo	Consultadoria na área dos direitos de autor e na implementação das Licenças <i>Creative Commons</i> .
De Facto Editores	Editora	Livros técnicos/científicos
Eduardo Costa - Produções Audiovisuais	Produtora Audiovisual	Apoio à conceção do vídeo e acesso ao <i>software</i> para formatação de imagem.
Escola Profissional Cristóvão Colombo	Escola	Realização de testes-piloto ao artefacto (protótipo) junto de algumas turmas de alunos.
Estimei	Loja/Livraria	Livro.
Instituto NeuroMais	Formação	<i>Tablet</i> .
Madeira Viagens	Agência de viagens	Consultadoria e organização de viagens e alojamento.

Importa referir que entendemos este trabalho com os mecenas como uma forma de transferência de conhecimento, ligação com a sociedade e disseminação do conhecimento, tal como nos orientam os princípios da ciência aberta.

4. A exposição

A exibição-piloto do artefacto ocorreu na exposição TT+A (Tradição, Tecnologia e Arte) na Casa José Saramago em Óbidos (Portugal), de 23 a 26 de julho de 2019, no âmbito do 7.º Retiro Doutral em Média-Arte Digital^{iv}, um evento para o qual a Tradição, a Tecnologia e a Arte foram convocadas, com o propósito de criar um diálogo (im)provável entre esta tríade. O facto de a tradição ser um conceito associado às práticas do passado, datada e afastada das inovações culturais e tecnológicas, não significa que se mantenha à margem da criação artística da atualidade. Por outro lado, a tecnologia há muito que deixou de ser entendida apenas como um conjunto de técnicas e equipamentos tecnológicos na sociedade contemporânea, tornando-se um meio de estar, de ser, de fazer e de se expressar. A arte cria, assim, um contexto ideal para intermediar um diálogo profícuo entre a tradição e a tecnologia. Nesta exposição, os artefactos expostos estabeleceram um diálogo entre os elementos da tríade Tradição – Tecnologia – Arte, aparentemente improvável, mas que a experiência e a interação com os artefactos em exibição mostrou ser possível.

Num plano macro, Óbidos enquanto vila literária e a Casa José Saramago (espaço de homenagem ao escritor português nobelizado em 1998) ajudaram a criar um ambiente propício às ideias relacionadas com os livros e a literatura. Em termos micro, o espaço disponibilizado para a instalação do artefacto consistia num recanto com função de sala de leitura, onde se encontrava uma estante com livros em exposição, como mostra a Figura 10. São elementos que confluem para a construção da ideia de histórias e das narrativas, enriquecendo o ambiente envolvente do artefacto – um cenário propício ao artefacto, uma vez que a Tradição, a Tecnologia e a Arte são características que o incorporam. Assim, a sua temática integrou-se perfeitamente no ambiente literário dos espaços, macro e micro, que acolheram a exposição.

Quanto à instalação do artefacto propriamente dita, a sua conceção teve em mente uma exibição sobre uma mesa como forma de estabelecer a ligação ao tradicional ambiente de leitura nas bibliotecas. Embora o ideal fosse uma mesa antiga, ou de linhas clássicas, a que foi disponibilizada tinha linhas modernas e simples, o que acabou por valorizar o artefacto, uma vez que os contornos discretos do móvel ajudaram a dar destaque ao objeto que estava sobre ele. A Figura 8 mostra como idealizamos o artefacto exposto na mesa com as respetivas dimensões, na disposição espacial.

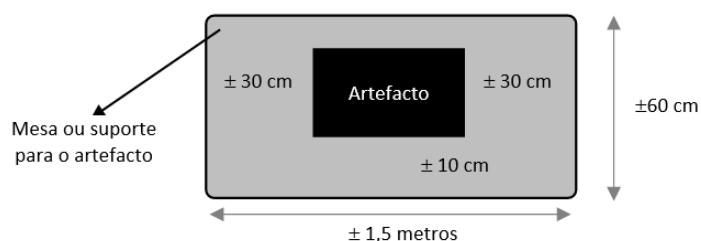


Figura 8 - Esquema de exibição

No desenho do artefacto idealizou-se um cenário de exibição no qual o usufruidor se apercebesse da sua existência a alguma distância, sendo levado ao seu encontro pela curiosidade. À medida se aproximasse do artefacto, o usufruidor aperceber-se-ia do seu verdadeiro significado/conteúdo – mas só junto a ele tomaria a decisão de interagir. O artefacto foi, pois, desenhado para ser instalado perto de uma parede, ou de um obstáculo que apenas permitisse a aproximação do usufruidor pela frente. Lateralmente, não deveriam existir elementos distrativos a curta distância, como representado na Figura 9.

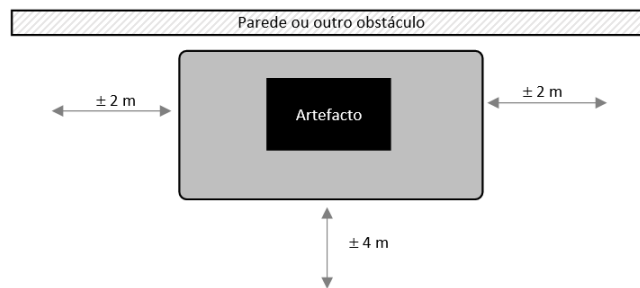


Figura 9 - Disposição no espaço

No local da exposição, observámos que estes requisitos estavam presentes no espaço disponibilizado, conforme é mostrado na Figura 10.



Figura 10 - Espaço de exposição

Para o artefacto cumprir o seu objetivo, foram identificados alguns requisitos inerentes ao espaço de exposição que deveriam ser acautelados; uns tinham carácter obrigatório, como o acesso à *internet* ou a energia elétrica, outros eram apenas desejáveis, como a iluminação e um ambiente propício ao silêncio.

O acesso à *internet* era um requisito imperioso, uma vez que o usufruidor teria de a utilizar no seu *smartphone* (Elemento 2). Logo, teria de se assegurar, no espaço de exposição, um bom sinal de *internet* (à época 3G/4G) para o *smartphone* do usufruidor funcionar como descrito para o Elemento 1, assim como o *Hotspot WiFi* integrado no próprio artefacto. Em alternativa, poderia haver uma rede *WiFi* própria do espaço, de acesso fácil e gratuito (configurada como de acesso livre). Por outras palavras, uma estrutura comunicacional que permitisse a partir de qualquer *smartphone* o acesso sem necessidade de procedimentos de identificação, como a inserção de *passwords*. Verificou-se que todo o local de exposição tinha acesso a uma rede *WiFi* aberta e a um bom sinal 3G/4G. No caso da energia elétrica, o requisito era apenas o de um ponto de acesso onde se ligasse o cabo de alimentação do artefacto, o qual incorpora dois componentes

que necessitam de energia: o *tablet* e o *Hotspot WIFI*. Quanto à iluminação, dado que o artefacto apresenta um vídeo num *tablet*, a qualidade com que o usufruidor visualiza as imagens depende, em muito, da iluminação do espaço de exposição. Por isso, era aconselhável que não fosse muito forte, para evitar reflexos no *tablet*, mas não tão fraca que não permitisse a leitura das informações escritas no artefacto. No local, verificou-se que a luz natural, proveniente de uma janela, poderia ser controlada através desta, e que os focos de iluminação artificial eram ajustáveis. No que diz respeito aos sons no espaço envolvente, considerou-se desejável a inexistência de ruídos distrativos que perturbassem ou influenciassem a concentração do usufruidor, uma vez que o artefacto convida à reflexão do usufruidor. Logo, o espaço de exibição devia ser calmo e silencioso. Constatou-se que, dado que o espaço disponibilizado era afastado tanto da entrada da exposição como de outros artefactos, o ambiente cumpria este requisito de silêncio.

Finalmente, o processo de montagem decorreu como planeado, de forma rápida e sem percalços. O espaço foi encontrado disponível, limpo e arrumado, conforme requisitado. O artefacto inclui um saco próprio para transporte (Figura 11), garantindo a sua integridade física e funcional, o que facilitou a montagem. Além disso, uma vez que foi construído em peças modulares (Figura 12), para ser facilmente transportado e montado rapidamente, processo já testado noutras experiências-piloto prévias, a sua instalação demorou apenas 10 minutos, sendo o resultado final o que consta na Figura 13.

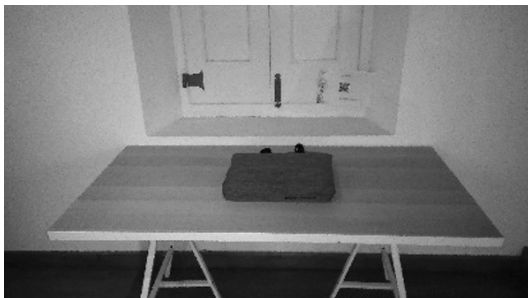


Figura 11 - Saco para transporte



Figura 12 - Componentes do artefacto



Figura 13 - Artefacto montado e respetivo espaço

5. Avaliação da exibição

Para a avaliação da exibição do artefacto teve-se em conta tanto o *feedback* dos autores dos outros artefactos em exposição, como o dos usufruidores, através da aplicação de instrumentos de recolha de dados considerados mais apropriados a cada situação, além da própria autorreflexão da experiência de participação na exposição.

A avaliação por parte dos pares teve como base um inquérito realizado junto dos/as autores de outros artefactos. Para tal, colocámos, informalmente, as seguintes questões, que deveriam ter como resposta, em alternativa, “Sim” ou “Não”, à exceção da última questão, de resposta aberta:

1. Conseguiu compreender o funcionamento do artefacto?
2. Chegou ao fim da experiência?
3. Conseguiu refletir sobre os resultados da experiência?
4. Acha que o artefacto cumpre o objetivo para o qual foi criado?
5. O que alteraria no artefacto?

Dos oito autores com artefactos em exposição, apenas não foi possível obter respostas de um. Portanto, a amostra deste breve inquérito por questionário é de sete inquiridos num universo de oito. Segundo Coutinho (2011), o termo “Amostra” refere-se a um “conjunto de (pessoas, objetos, etc.) de quem se recolherá os dados [; já o Universo] define a totalidade a que se pretende generalizar os resultados e que partilham uma característica comum” (Coutinho, 2011, p. 85).

À pergunta 1, todos os inquiridos responderam que conseguiram compreender bem o funcionamento do artefacto, com dois deles a realçar que era intuitivo.

Seis dos inquiridos responderam, na pergunta 2, que conseguiram chegar ao fim da experiência, ou seja, que experienciaram o artefacto na sua plenitude, conforme previsto. Um inquirido não fez uma utilização completa. Quando questionado sobre a razão para que tal tivesse acontecido, a reação foi inconclusiva, porém podemos sugerir que tenha desistido por falta de interesse, o que não deixa de ser uma informação relevante.

A pergunta 3 questionava se o artefacto teria provocado a esperada reflexão. Dos seis autores contabilizados como tendo completado a experiência, todos afirmaram ter refletido sobre a usufruição realizada. Destaque-se o facto de um ter expressado que não deveria ser uma reflexão imediata, mas posterior. Este mesmo inquirido recordou que voltou a pensar na experiência, na sua resposta e nos resultados dos outros, questionando-se sobre o facto de a sua resposta ter sido tão diferente das dos outros. Concluiu, ainda, ser este tipo de reflexão, a *posteriori*, o grande objetivo do artefacto.

Na pergunta 4, todos os inquiridos foram da opinião de que o artefacto cumpria o objetivo para o qual fora criado.

No caso da pergunta 5, todas as respostas foram também unânimes, tendo os inquiridos afirmado que não alterariam nada no artefacto. No caso desta pergunta, tentámos recolher mais sugestões para alterações, numa conversa aberta e informal, atendendo às condicionantes de cada ocasião, numa pequena entrevista semiestruturada. Assim, sistematizando globalmente os resultados obtidos em cada pergunta/resposta:

- A interação deverá ser realizada num ecrã integrado no próprio artefacto e não no *smartphone* do usufruidor? Todos os inquiridos foram da opinião de que a utilização do *smartphone* é melhor, além de ser inovadora. Um deles, sugeriu que a alteração (para o próprio artefacto, em vez de recorrer ao *smartphone* do utilizador) faria com que o artefacto fosse diferente, mas que talvez não ficasse tão bem.
- Alteraria o aspeto estético do livro (Elemento 1)? Os inquiridos responderam que a estética está bem conseguida e cuidada, mas um referiu a necessidade de um “trabalho estético mais abstrato”. Uma outra sugestão foi a da integração de mais componentes de média-arte no próprio livro.
- Será útil a integração de um sensor de movimento para detetar a aproximação do usufruidor para despoletar o *play* do vídeo? Nenhum inquirido achou pertinente essa alteração.

As inquirições descritas, junto dos autores com outros artefactos expostos, permitiram verificar que a avaliação dos pares foi positiva, tendo o artefacto recolhido opiniões construtivas. Estes dados foram posteriormente objeto de uma reflexão ponderada para melhorar o artefacto, nomeadamente no que diz respeito ao conceito/experiência subjacente.

Para avaliar a utilização dos usufruidores e recolher o respetivo retorno crítico, utilizámos dados provenientes dos serviços *web* utilizados e, principalmente, de observações efetuadas ao comportamento do público da exposição.

Durante a exposição, o artefacto foi experienciado por dezanove usufruidores: foi esse o número de pessoas que utilizaram o artefacto tal como se previa, ou seja, que visualizaram o vídeo, acederam ao questionário no seu próprio *smartphone*, responderam à questão e visualizaram os resultados. Estes dados são provenientes da ferramenta *web* de questionários utilizada^v no Elemento 2, contabilizando-se apenas as respostas obtidas nos dias da exposição, e a partir do código QR colocado no artefacto em exposição.

Conseguimos ainda detetar que houve vinte acessos ao questionário (Elemento 2), mas, tendo havido apenas dezanove respostas, concluímos que um dos usufruidores não respondeu ao questionário, apesar de o ter aberto. Ou seja, podemos afirmar que um usufruidor não experienciou o artefacto na sua totalidade.

A plataforma do registo do domínio *web* do artefacto contabilizou doze acessos nos dias da exposição, a partir da mesma região onde a exposição ocorreu. Estes dados sugerem que doze pessoas quiseram saber mais sobre o artefacto, acedendo ao respetivo *website*, logo, demonstraram alguma curiosidade pelo artefacto num espaço e tempo exteriores à exposição.

Analisou-se também o comportamento do público em relação ao artefacto em exibição durante a exposição. Embora não tenha sido uma observação constante e sistemática, permitiu recolher alguns dados válidos como indicadores qualitativos do comportamento dos usufruidores. Observou-se que, de forma geral, os visitantes aproximavam-se do artefacto e paravam junto dele durante algum tempo. Notou-se que esta paragem durava mais tempo do que se previra aquando do seu desenho. Uma vez junto do artefacto, pareciam adotar uma atitude de observação/contemplação, enquanto objeto, na sua globalidade, e, depois, centravam-se no vídeo. Só mais tarde procuravam o *smartphone* para continuar a experiência.

Para além da análise aos comportamentos dos usufruidores que experienciaram o artefacto, também consideramos importante referir os que não completaram a utilização esperada. Detetámos casos em que, apesar de terem o *smartphone* na mão, acabaram por não o utilizar, afastando-se sem realizarem a interação prevista. Embora não tenham sido recolhidos dados estatísticos que atestem a quantidade destes casos, percebemos representarem cerca de 40%. Ou seja, uma parte significativa dos usufruidores que observaram o artefacto não tentou interagir com ele. Esta constatação é um dado importante para a reflexão sobre o artefacto e respetivo conceito/experiência. Uma vez que esta exposição foi a primeira exibição perante um público real, tornou-se uma valiosa contribuição para a reformulação de alguns aspetos menos conseguidos.

Finalmente, quanto a uma autorreflexão, e considerando que o funcionamento do artefacto já tinha sido alvo de um teste-piloto prévio, ocorrido numa fase a que chamámos de simulação em ambiente real, consideramos para a exposição duas grandes questões: A estética cativa? O tipo de interação é o mais indicado?

A resposta à primeira interrogação parece-nos ser positiva, atendendo aos testemunhos sobre a aparência do artefacto. No entanto, consideramos que este *feedback* não foi conclusivo e que o aspeto artístico é uma dimensão a ser trabalhada, ou talvez deva ser abordada com outra maturidade. Quanto à segunda questão, o facto de se ter optado pela interação com o artefacto através do *smartphone* do próprio utilizador, se por um lado é inovador, por outro, poderá ser uma limitação. Sublinhe-se que a exposição promoveu muito a utilização de códigos QR e o acesso a conteúdos *web*, criando um ambiente tecnológico perfeito para o artefacto; se não tivesse sido esse o caso, tal poderia ter constituído um constrangimento à sua usufruição.

6. O artefacto como proposta para o PNC

Na génese deste artefacto, encontra-se a intenção de explorar um conjunto de valências e potencialidades que permitam a sua aplicação ao contexto prático das atividades do PNC, dado que a sua idealização emergiu no ambiente académico do projeto de tese^{vi} “Educação, Cinema e Redes Sociais: uma investigação sobre o Plano Nacional de Cinema”, acolhido pelo CIAC, Centro de Investigação em Artes e Comunicação da Universidade do Algarve, e integrado no

doutoramento em Média-Arte Digital (Universidade Aberta/Universidade do Algarve) do primeiro autor com orientação científica das coautoras.

O PNC, iniciativa governamental direcionada para o contexto escolar, visa educar crianças e jovens para a linguagem do cinema e, conseqüentemente, para a leitura e interpretação de imagens em movimento, assim preparando-os para serem melhores cidadãos, numa sociedade cada vez mais audiovisual e mediatizada. No espaço escolar, o PNC é concretizado por equipas de professores, segundo orientações da coordenação nacional, através das mais variadas atividades extraescolares em torno do cinema, não se circunscrevendo apenas à exibição de filmes, mas, sobretudo, a dinâmicas que promovam a reflexão, tomando como ponto de partida os filmes.

Assim, o artefacto tem implícita uma proposta de aplicação da experiência adquirida no seu processo criativo aos cenários das atividades das escolas participantes no PNC, transformando-se num artefacto educacional passível de ser usufruído tanto em contexto físico como virtual. No primeiro caso, a utilização em Exposição, consiste na instalação do artefacto num espaço físico, do qual o usufruidor é o aluno, sendo a utilização aquela que antes se descreveu. Por exemplo, poderá ser instalado nos espaços escolares para ser experienciado pelos alunos, ou nos eventos promovidos pelas equipas do PNC nas escolas. O segundo caso, o da usufruição virtual, através do *website* do artefacto, no qual poderá ser disponibilizada uma versão virtual, permite que o mesmo seja usufruído através da *internet*. Esta ferramenta *web* será desenvolvida, em estreita colaboração com uma escola com a qual se constituirá um grupo-piloto de usufruidores para validar as opções tomadas, com vista à sua integração nos diferentes contextos práticos das atividades do PNC. Deste modo, para além da experiência de utilização do artefacto num contexto físico, também se pretende desenvolver um artefacto virtual, através do qual o usufruidor possa realizar a experiência a distância, completamente *online*.

Conforme foi referido, a forma de aplicação do artefacto ao contexto de trabalho do PNC está dependente das dinâmicas desenvolvidas por cada escola participante. Implica, pois, um trabalho de adaptação a cada caso prático. Dado que a proposta aqui descrita ainda é uma enunciação – expusemos a génese da criação e apresentação do artefacto em contexto de exposição –, estamos conscientes da importância do trabalho a ser feito com um grupo-piloto, de modo a confirmar (ou refutar) a funcionalidade da proposta enunciada neste texto.

Pretende-se igualmente que o E2S possa consubstanciar uma metodologia pedagógico-didática de trabalho, permitindo aos professores aplicarem os seus fundamentos teórico-práticos às atividades do PNC junto dos alunos, numa lógica de Recursos Educacionais Abertos (REA). Recorde-se que a UNESCO^{vii} definiu REA como os materiais de “ensino, aprendizagem e pesquisa em qualquer formato, digital ou outro, que sejam do domínio público ou que tenham sido disponibilizados sob uma licença aberta que permite o acesso, utilização, adaptação e partilha por outros sem qualquer custo, restrição ou limitação” (Paris OER Declaration, 2012, p. 1). Assim, a premissa subjacente aos REA, de que comungamos, é a de que os recursos que publicamos através da *internet* possam ser (re)utilizados e partilhados em locais diferentes e

de formas diferentes, para satisfazer uma necessidade específica, nomeadamente de construção do conhecimento.

Neste sentido, a versão virtual do artefacto, além de integrar procedimentos operacionais e de apoio à tomada de decisões, consoante as condições existentes em cada caso de aplicação prática, será acompanhada por um conjunto de documentos/tutoriais, segundo o espírito dos REA. Desta forma, a documentação disponibilizada assume um carácter orientador e de apoio às equipas do PNC a realizarem atividades com metodologias e objetivos similares aos do artefacto, ficando, assim, capacitadas para (re)criar as suas próprias experiências com os alunos. Em suma, esperamos que o E2S possa constituir uma metodologia válida para abordar as literacias mobilizadas pelo próprio PNC, sobretudo a literacia dos *medias* e a literacia fílmica.

7. Considerações finais

Ao longo deste texto, para além da apresentação do artefacto, procurámos expor a experiência da sua exibição, perspetivando uma aplicação ao contexto escolar do PNC. Este caminho leva-nos a considerar, de novo, que os artefactos em média-arte digital são mais do que objetos para serem apreciados passivamente, que acarretam características virtuais que levam o usufruidor a encetar uma viagem de “contemplanção estética de natureza polissémica, em múltiplos cenários de uso e fruição que vão desde a educativa, científica, lúdica, filosófica ou mesmo a sagrada, o que pode estimular a realização de experiências qualitativas” (Marcos, 2012, p. 133).

Ressalvando especificidades próprias, consideramos possível estabelecer uma associação de um artefacto deste tipo a um objeto de aprendizagem, que Leffa (2016) entende ser um “artefato cultural que usamos como meio (...) para adquirir um determinado saber contido nesse artefato” (p. 360). Assim, a proposta materializada pelo E2S alia as características de uma obra de média-arte digital com as de um recurso educacional. Consideramos, pois, que o artefacto “*Emotions to Scenes*”, com génese no contexto da média-arte digital, pode ser também um artefacto educacional, apresentando-se, neste caso, como uma proposta a ser utilizada no contexto no Plano Nacional do Cinema.

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ⁱ <http://e2s.joaopinto.net/>

ⁱⁱ Medidas do livro: comprimento = 38 cm; largura = 28 cm; espessura = 3,5 cm.

ⁱⁱⁱ Fonte: Plano Nacional de Cinema.

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^v www.123formbuilder.com

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^{vii} UNESCO: Organização das Nações Unidas para a Educação, a Ciência e a Cultura.