

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

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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 (Čavojeová & 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 (Čavojeová 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 (Čavojeová 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 9<sup>th</sup> and 24<sup>th</sup> 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**).

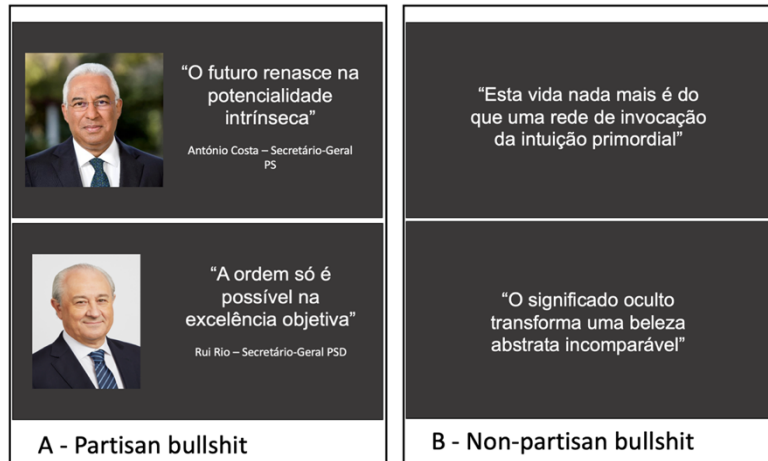


Figure 1. Example of the pseudo-profound bullshit used in the survey.

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	$\alpha$	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:  $\alpha$  = 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		
<b>BS pro-left</b>	2.76	.94	2.63	1.02	2.30	.94	4.903	.006
<b>BS pro-right</b>	2.29	.85	2.52	.93	2.56	.87	2.676	.071
<b>All bullshit</b>	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		
<b>BS pro-left</b>	2.63	1.00	2.55	.95	2.51	.90	.276	.750
<b>BS pro-right</b>	2.42	.89	2.25	.72	2.54	.94	.882	.415
<b>All bullshit</b>	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		
<b>BS pro-left</b>	2.83	.93	2.41	.96	11.625	<.001
<b>BS pro-right</b>	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 ( $\leq 12$ 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>
<b>Gender</b>	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	
<b>Age</b>	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	
<b>Education</b>	≤ 12 <sup>o</sup>	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 parties<sup>1</sup>. 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.

<sup>1</sup> Access the Public Opinion Portal at: <https://www.pop.pt/pt/grafico/a-politica/confianca-nos-partidos-politicos/pt/?colors=pt-0&gtype=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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