Twisted knowledge construction on X/Twitter: an analysis of constructivist sensemaking on social media leading to political radicalization

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Abstract

Purpose – This study aims to identify how Brazilian followers of an X/Twitter profile engage in theory-building processes leading up to the January 8, 2023 riots in Brasília, the Brazilian capital. This paper seeks to understand how cognitive and sociocultural processes weave together to weaponize collective knowledge construction that, in isolation, could be seen as virtuous but, in specific contexts, might lead to radicalization.

Design/methodology/approach – This study uses qualitative content analysis of comments on ambiguous X/Twitter posts published by a conspiratorial profile associated with former President Jair Bolsonaro. Content was published in the three weeks that preceded the coup d'état attempt by Bolsonaro supporters on January 8, 2023.

Findings – Findings point to users' resorting to intuitive knowledge to support sensemaking processes in their search for subliminal meanings in tweets. That includes, for example, attempts to crack binary code-encrypted messages. This study also identified practices of cross-media sourcing, where users collect evidence from alternative social media channels to interpret messages containing verbal and visual information. Finally, this study found that religious symbols are often instrumentalized and become a lens through which followers organize information to integrate with their existing knowledge and assumptions.

Research limitations/implications – With this work, the authors build on existing scholarship on epistemologies used by conspiratorial and radicalized groups as they engage in systematic sensemaking and often refer to religion to interpret messages that motivate extreme political position-taking. This study addresses a similar phenomenon as it unfolds in an understudied geographical context (Brazil) and seeks to demonstrate how individuals engage in collective sensemaking practices. The authors hope that their findings inform educators as they explore the affordances of social media to foster positive collective learning experiences in reasoning supported by social media.

Originality/value – The originality of this study is twofold. First, this study uses an analytical lens that draws on the learning sciences and cognitive science for inquiry of radicalization happening around social media. The authors understand that social media lend themselves particularly interesting to the analysis, as they are settings where notions of mastery blur, and individuals engage in conversations on complex, controversial topics. With that engagement, they demonstrate willingness to reason collectively. Second, this study investigates how those phenomena unfold in an understudied context, responding to calls for more diversity in research in the learning sciences as well as in media studies.

Keywords Social media, Reasoning, Global south, Media literacy

Paper type Research paper

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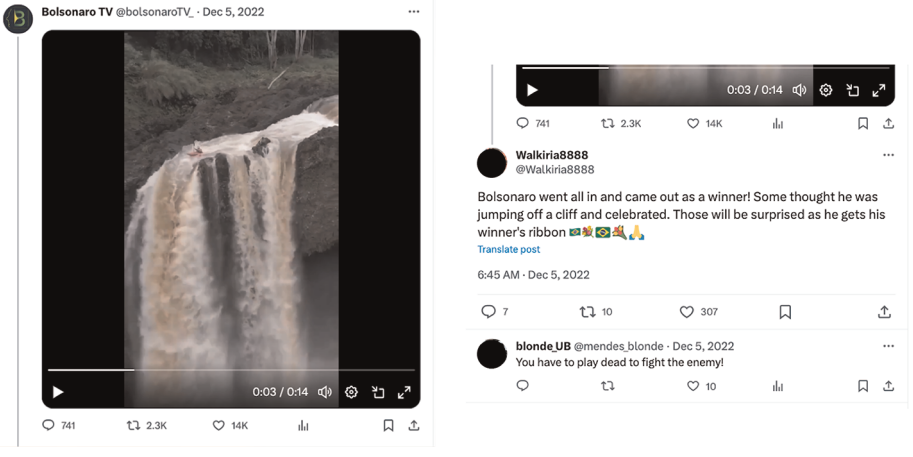
Introduction

On December 5, 2022, a Brazilian X/Twitter [1] account named "Bolsonaro TV" (@bolsonaroTV_) posted a 14-second video starting with the initial chords of "Still D.R.E." by Dr. Dre and Snoop Dogg. In the video (see Figure 1), a canoe approaches the edge of a waterfall, falls downstream, and reemerges four seconds later as the drumbeat and vocals of the song start. In replies to this tweet, leading up to the attempted coup in Brazil's capital on January 8, 2023, users relished the ambiguity of the message. They saw it as an enigma they had to decode, speculating about its deeper political meaning. Connecting the waterfall imagery to the then-recent election results in Brazil, a user mused: "Some thought they would do well, but they fell from the waterfall, folks *BR*" Another user interpreted it in the opposite direction: "The road ahead is long and difficult, but we will persevere," to which others replied, "I also interpret it that way." While strongly associated with the persona of former president Jair Bolsonaro, the authorship of the @bolsonaroTV_ account was a matter of dispute between followers, and no definitive evidence exists as to whether the account's authorship.

In conjunction with the responses it generated, the above-mentioned tweet illustrates the practices of *emergent collective knowledge construction* (Russo *et al.*, 2021; Russo and Blikstein, 2022; Russo and Blikstein, 2023) that we investigate in this article. Analyzing the behavior of Brazilian X/Twitter users seeking to find meaning in the cryptic posts by @bolsonaroTV_, we ask: *how does the decryption of social media posts engage right-wing conspiratorial groups in a process of knowledge construction that feels agential?* In line with Sosa (2013), we understand agency in sensemaking as one's ability to draw conclusions from evidence available in a certain context, in combination with one's accumulated knowledge and corresponding epistemic feelings—that is, how one experiences phenomena (see Arango-Muñoz, 2014).

Our research shows how some right-wing Brazilian social media users actively resort to collective knowledge construction practices; in that process, they bridge their *current understandings* with online "clues" spread in conformity with a predefined political agenda. This process of agential sensemaking, in isolation, could be seen as virtuous, but in specific



(a) **(b)**

Source: Screenshot taken by the first author

Figure 1.
The video of the canoe descending a waterfall (a), and replies by users offering their interpretations (b)

political contexts like the one we investigate here, it can lead to radicalization and manipulation. This research shines a light on an understudied Global South context, seeking to understand how the dynamics of information spread and consumption on Brazilian social media can facilitate the *weaponization of "constructivist" learning* (Piaget, 1977; Fosnot and Perry, 2005). One of the pillars of constructivist learning is that humans (children and adults alike) are natural-born theorists of the world and are constantly trying to make sense of reality by interacting with people and environments and reconfirming or updating their mental representations, models, and schemata. When previous knowledge and new experiences build up new schemata that "feel" like the individuals themselves constructed them, these new theories become resilient and hard to change (Ackermann, 2001).

Our findings point to a convergence in these types of practices observed in other countries, such as resorting to religion as a key to building an understanding of the state of affairs (Tripodi, 2018) and, more generally, other collective knowledge-building practices online associated with radicalization and threats to democracy (Zuckerman, 2019), such as crowdsourcing skills and knowledge in participatory propaganda (Asmolov, 2019). However, our research focuses more specifically on the intersection of media studies and learning sciences, a relatively understudied area. Even though it is well known that bad actors try to spread false or misleading narratives online to influence political discourse (Freelon and Wells, 2020), we know less about *how*, from a cognitive perspective, this process has been happening so felicitously even when the discourse in question borders the surreal (e.g., reptile aliens lurking among us or the Earth being a flat disc). Understanding the speed and efficiency with which these ideas spread requires a quintessentially interdisciplinary approach, like the one we propose in this article.

One of our key assumptions is that social media is *a novel type of learning environment that is particularly well-adapted to* political themes. Within this environment, political actors can intentionally direct collective, "constructivist" sensemaking practices to provide the epistemic foundations for radicalization, even though learners feel that they are "connecting the dots" themselves. Previous work has provided evidence of adjacent phenomena in other geographical contexts (e.g., Marwick and Partin, 2022; Stewart *et al.*, 2022; Tripodi *et al.*, 2023). For instance, focusing on the Canadian context, Stewart *et al.* (2022) found that social media encouraged an "epistemological posture of doubt" toward mainstream sources of information, building "skeptical communities" around conservative political influencers. In the USA, Marwick and Partin (2022), citing the QAnon example, argued that social media is uniquely positioned to foster communities of practice prone to radicalization. Extending this research to the understudied Brazilian context, and with a focus on the analytical lenses of the learning sciences, we argue that in the case of the Brasilia riots, those emergent collective knowledge construction practices incited a section of Bolsonaro's constituency toward an attempted *coup d'etat*.

Thus, in dialogue with extensive research that investigates motivations, processes, and consequences of radicalization online (e.g., Marwick and Lewis, 2017; Santini *et al.*, 2022; Soares *et al.*, 2019), we aim to offer a contribution that lies at the intersection of the cognitive sciences, the learning sciences, and social media studies. Our findings contribute to a better understanding of the nuances of *social media as a novel type of learning environment*—albeit one that might also serve antidemocratic ends. We intend to contribute to research that looks beyond pointing to the mere *naiveté* of individuals falling prey to radicalizing political communication [2] but instead, look at this new type of political propaganda as a powerful way to lead citizens to radicalization. Furthermore, our study contributes to an understanding of media literacy practices such as lateral reading (Wineburg and McGrew, 2017) that takes into consideration the polluted state of

the media landscape (Phillips and Milner, 2021), but might direct learners to alternative resources online that lead to confirmatory evidence, instead of content that encourages critical evaluation of existing assumptions.

We first present a review of the literature on collective knowledge construction related to political radicalization, as well as some of the social and cognitive aspects of learning that may affect that knowledge construction, including those related to epistemic agency. We then present an overview of the recent literature addressing political radicalization in Brazil, especially social media's role in this context. After laying out the details of our methodological approach, we present our findings, split into three themes that speak to the process of collective online knowledge construction leading to radicalization: the search for subliminal messages in tweets, triangulation of references across social media, use of the Bible as an interpretative framework. Finally, we draw conclusions about relevant educational implications and discuss social media's affordances and enabling characteristics for collective knowledge construction. As we expand in that final section, those enabling characteristics are (1) the anonymity of peers, (2) the over-saturation of information, (3) its brevity and rapidity in communication, (4) its tendency to facilitate confirmation bias, and (5) the weaponization of data voids.

Literature review

Our literature review focuses on knowledge construction processes taking place in online communities associated with radicalization, as well as the particularities of the Brazilian scenario. Although those connections are not always explicit in literature, we attempted to highlight them. As a result, our review draws on literature from (a) media studies on dis/misinformation and their dynamics in online spaces, (b) the intertwining of those practices with epistemic agency and epistemic feelings, and (c) learning and cognitive science research addressing collective knowledge construction and the role of intuitive knowledge.

The dynamics of radicalization in online spaces

Recent work has discussed practices of learning leading to radicalization among online users. For example, Marwick and Partin (2022) argued that QAnon kept users engaged in epistemologies, including established practices such as *peer validation* and *assessment of evidence*. Their work foregrounded the "do your own research" (DYOR) attitude that challenges many assumptions about the effectiveness of fact-checking or conventional media literacy practices. Zuckerman (2019) demonstrated in detail the truth-seeking practices that QAnon followers employ, including the interpretation of "intelligence drops" spread across online platforms that allegedly corroborate the Q conspiracy. Tripodi *et al.* (2023) documented how a DYOR attitude drives processes of participatory disinformation in which ill-intentioned groups leverage the affordances of online platforms such as X/Twitter, Google Scholar, and Yandex to activate extreme right-wing worldviews.

While the cultural differences between the USA (where most of the research above has been conducted) and Brazil mean that the results cannot be simply transferred to the Brazilian scenario, we see critical parallels between the two contexts, especially concerning the intertwinings between alternative media and political radicalization. For example, Nemer (2022) identified a "human infrastructure" of disinformation that propelled extremism among the right-wing in Brazil and was deeply connected with Bolsonaro's rise to power. Other Brazilian scholars in media studies (e.g., Soares and Recuero, 2021) demonstrated how human infrastructure emerged from closed networks of instant messaging apps to a much broader landscape with professionalized content generation, significantly adding to the polarization of the 2018 presidential election. For instance, Soares and Recuero (2021) found that right-wing groups had more exposure to radicalizing content in the period and that opinion leaders used

that content in their further-reaching communication. Ozawa *et al.* (2023) documented the pathways of radicalization from WhatsApp groups in the 2018 elections to the so-called "Office of Hate" ("Gabinete do Ódio," in Portuguese), an unofficial propaganda apparatus that promoted polarization and misinformation during Bolsonaro's term in office.

Bolsonaro's rhetoric has long been connected to threats to civilian, democratic rule in Brazil (Burity, 2020), especially in nostalgic references to the ruthless dictatorship that ruled the country between 1964 and 1985—and that rhetoric found its place in social media, including spaces not officially associated with the former president. Directly related to the period of interest to this paper, Bastos and Recuero (2022) identified an "insurrectionist playbook" present in Bolsonaro's 2022 presidential campaign that included references to election denialism, calls for military intervention, and support for the 1964–1985 dictatorship.

Those studies exemplify how social media-based strategies have been used to support anti-democratic agendas in Brazil. Their focus, however, lies on understanding the intricacies of the media and disinformation ecosystems; what remains understudied are aspects that bridge *learning processes, cognition,* and *radicalization*.

Collective knowledge construction in online spaces

We conjecture that at the heart of the twisted collective sensemaking processes described above is a sense of epistemic agency, that is, one's ability to interpret evidence available given one's accumulated experiences but also given a certain context (Sosa, 2013; Proust, 2008), including external tools, and cultural influences (Proust, 2014), in addition to real-time bodily experiences (Dorsch, 2023). Among the mediators between the external world and mental activities related to epistemic agency are epistemic feelings: phenomenal experiences associated with knowledge and cognition (Arango-Muñoz, 2014) that are integral to error detection and confidence, affecting beliefs, decisions, and actions (Arango-Muñoz and Michaelian, 2014). Dokic (2012) argues that those feelings are "recruited" as representations of mental states that hint at the next action. Epistemic feelings are also believed to play a role in the emergence of curiosity and surprise, which are associated with knowledge acquisition and exploration (Vogl *et al.*, 2021; Litman *et al.*, 2005).

Those connections between epistemic feelings and epistemic agency become critical in the context of this study and in light of previous evidence of the problematic political sensemaking mentioned above. Dorsch (2022) discussed how the affordances of online platforms exploit users' epistemic feelings, leading to interpretations of content that can be fallible but *return positive emotional states nevertheless*. Based on this interpretation, we conjecture that social media presents a propitious mix of tools and cultural influences that promote epistemic feelings such as curiosity and confidence. Ill-intentioned political actors then exploit those feelings in a way that feels agential to individuals.

The examples in this section demonstrate sociocultural and cognitive components conducive to knowledge construction. Marwick and Partin (2022) characterized forum participants as members of a community of practice, as described by Lave and Wenger (1991). As such, newcomers move from peripheral participation toward performing full participation in shared activities—in QAnon's case, that takes the form of a "conspiratorial community of practice." In the learning sciences, research has used similar perspectives to investigate learning in contexts like movements and organizing (e.g., Curnow and Jurow, 2021), but less attention has been given to comparable arrangements in the context of right-wing radicalization.

Although scholars have been discussing the educational implications arising from social media (e.g., Greenhow *et al.*, 2020), and researchers have tried to deploy social media in classrooms as a component of instructional sequences or learning environments or as a

source of cultural references to learners (e.g., Vea, 2018; Shaw *et al.*, 2023; Stornaiuolo, 2020), social media in its "raw state" as a self-sufficient learning environment remains largely out of the focus of the learning sciences as a field. That is counterbalanced by an increasing interest in the topic, as demonstrated by the growth of conference work that addresses the opportunities to learn with and on social media, especially regarding civics-related topics and simulated social media interfaces (e.g., Shaw *et al.*, 2019; Varda and Kyza, 2023). One example is Varda and Kyza's (2023) exploratory study of the connection between epistemic emotions and learners' reactions to simulated X/Twitter posts containing credibility labels. Their data indicate that learners' emotions toward posts were associated with their engagement (the more intense the reported emotion, the higher the engagement). To the best of our knowledge, no work has investigated evidence of "in vivo" reasoning processes leading to radicalization in social media in those learning sciences venues.

In light of the identified gap in research of those processes from a learning sciences perspective, we turn to foundational literature on constructivism and cognitive science. Two concepts become central in our analysis: *intuitive knowledge* and *interpretive frameworks* reflected in language. One of the instances of intuitive knowledge are "phenomenological primitives," or p-prims (diSessa, 1993). Those "small" pieces of preexisting intuitive knowledge play a role in novices' understanding of phenomena. They were initially conceived of in the realm of physics teaching—for example, the assumption that the harder you push an object, the faster it will move, or the notion that big, "strong" objects can block the movement of other bodies. However, diSessa (2000) argues that the same mechanisms help interpret phenomena in the social world: "trying harder to develop a stronger argument to overcome an adversary" is an instantiation of a p-prim acting in the social world (diSessa, 2000, p. 154). In the context of radicalization, we have previously proposed that p-prims can be found in Bolsonaro and his followers' discourse, such as "the individual is always in conflict with the collective" (Russo and Blikstein, 2022). P-prims such as those have a similar function in understanding the social world as experiential *gestalts*, that is, "multidimensional wholes arising naturally within experience" (Lakoff and Johnson, 1980/2003). In both cases (p-prims and experiential gestalts), the mental structures we develop to organize past experiences provide us with mechanisms to interpret new concepts or experiences. Although in previous work we borrow the concept of p-prims from the physical world to interpret political discourse, we understand that experiential gestalts (and the accompanying idea of experiential and conceptual metaphors) present a better fit to this study: previous research has extensively documented how public discourse activates experiential reasoning and metaphors to discuss politically charged topics such as war (Lakoff, 1991), the COVID-19 pandemic, and immigration (Chkhaidze *et al.*, 2021).

Those framings that describe how prior experience shapes reasoning about social and political phenomena are tightly connected with the effects of interpretive frameworks on the evaluation of new information. Yeshurun *et al.* (2017) demonstrated that effect even in the case of *recent* and *brief* exposure to guiding cues: participants in their study interpreted the emotions and beliefs of a character differently depending on subtle narrative cues positioned at the beginning of a story. Other research in cognitive science has identified similar effects of verbal cues on solutions that participants devised for the problem of crime in a fictitious city: Thibodeau and Boroditsky (2013) showed that framing crime as a "virus" was associated with participants' devising reform-oriented solutions, whereas framing crime as a "beast" was associated with law-enforcement answers. By connecting those findings with information and media studies, it is not surprising that Tripodi (2018) found that radicalizing, alternative news networks populate online "information vacuums" about specific topics with stories that reaffirm the existing beliefs of their target groups. That

strategy works on at least two fronts: first, it partially satisfies the audience's *aspiration to see themselves as a critical thinker* and challenge mainstream media's "hidden agenda"; second, *it reinforces individuals' existing knowledge,* exploiting their *existing interpretive frameworks* in a process that feels epistemically agential.

In summary, our literature review traces a connection between explanations of radicalization provided by media studies and learning processes based on intuitive knowledge and sensemaking. In this section, we first discussed media studies work on practices of knowledge construction leading to or justifying radicalization among online users (e.g., Zuckerman, 2019; Tripodi *et al.*, 2023). We showed similarities with the Brazilian scenario (e.g., Bastos and Recuero, 2022; Nemer, 2022), such as the emergence of threats to democracy from niche spaces to the broader public discourse. We refer to literature connecting those phenomena with sociocultural and cognitive views of learning (e.g., Marwick and Partin, 2022) and argue that there is still a gap in the field of the learning sciences, which we attempt to address here with the support from literature in classical constructivism and cognitive science (e.g., diSessa, 1993; Lakoff and Johnson, 1980/2003). More specifically, we understand that interactions in social media offer a window into cognitive processes that can generate or consolidate radical views. Because those views are grounded in agential sensemaking, they acquire a robustness that is similar to the most solid and resilient forms of learning based on intuitive knowledge.

This connection between human learning, cognition, and radicalization (Russo and Blikstein, 2022; Russo and Blikstein, 2023) makes the study of social media as a new type of learning environment even more crucial. In this work, we hypothesize that the profile @bolsonaroTV_ illustrates how collective meaning-making in online communities reinforces or spurs radicalization. In other words, what many would see as radicalized conspiratorial content could be for these social media users *just a consequence of their "deeper thinking" about political events*, which is more likely to lead to action.

Methods

This study is based on a qualitative analysis of X/Twitter content published by the profile @bolsonaroTV_ and replies on a subset of its posts. As mentioned earlier, X/Twitter plays a central role in Brazilian politics: it is politicians' go-to social media platform (used for campaigning and official communication, including by former president Bolsonaro; see Levy and Sarmento, 2020; Cunha, 2023) and is a crucial site for political radicalization in Brazil. Indeed, studies have found evidence of radicalization in X/Twitter accounts of politicians' constituencies, especially during election time (Recuero *et al.*, 2020; Russo *et al.*, 2023), but also in between elections (e.g., Chagas *et al.*, 2022) with evidence dating back to at least 2013 (Recuero *et al.*, 2015).

The profile @bolsonaroTV_, which claimed to be "the official profile of the app Bolsonaro TV [3]," published its first post in November 2022, between the first and second rounds of the presidential election. Its header picture (see Figure 2 for a screenshot) shows a t-shirt with a part of the Biblical verse Matthew 10:26 ("Não tenhais medo," Portuguese for "Do not be afraid"). The profile picture has a stylized letter B side by side with the outline of a face, supposedly Bolsonaro's; its bio has the words in Portuguese for "Profile Bolsonaro. Instagram @bolsonaro.tv"; the bio also links to a nonexisting website (livraria.cafe). At the time of data collection, the profile had approximately 319,000 followers.

A purposeful aura of ambiguity marks the profile's authorship, and its identity is not verified. Most of the content comprises images or videos and very limited text. From the outset, many tweets are quintessentially open to interpretation and oftentimes decontextualized, as shown by the many examples in this article. Indeed, during unprecedented electoral turmoil,

this account successfully enticed a dedicated audience to find hidden meanings and seek further evidence (even though some would look like nonsense to non-Bolsonarist viewers). The account's high level of engagement is a testament to this success. The tweets analyzed in this study have an average of 2,900 replies, more than 4,500 retweets and quote-tweets, and above 36,000 likes; as a point of reference, Bolsonaro's official X/Twitter account has about 35 times the number of followers, yet its engagement metrics (such as number of replies, number of comments, number of retweets) consistently fared below those of @bolsonaroTV_ at the time of data collection.

Data was collected in April 2023, comprising content posted from December 19, 2022, to January 5, 2023. That time range starts with a tweet that lends itself exceptionally well to multiple interpretations (it shows a collection of zeros and ones, apparently forming a message in binary code; see Figure 3 below); the end date was the day of the last tweet before the insurrection on January 8. The profile published 25 tweets in the period, and we removed nine tweets that were not in the same "genre" of ambiguity (e.g., a tweet about the then-recent passing of soccer legend Pelé, a directly defamatory reference to a political rival). After filtering, we kept 16 tweets for analysis—5 contained video clips (7 to 28 seconds long), 7 had images, and 4 were text-only posts. In total, they received 3,081 first-level replies —that is, direct replies to the post. In addition to those first-level replies, the posts received 43,312 nested replies, that is, replies to replies, as of the time of data collection. Those were analyzed on a case-to-case basis. We analyzed the replies within the X/Twitter browser interface, which allowed us to understand the conversations in context and capture the visual content included in the replies (which would not have been possible had the replies been downloaded as spreadsheets.)

We used thematic analysis (Braun and Clarke, 2012), following an interpretivist epistemological orientation. Previous research has used thematic analysis when investigating politically-laden topics on X/Twitter (e.g., Tadros *et al.*, 2022; Tahamtan *et al.*, 2021), including around the highly polarized 2016 elections in the USA (e.g., Zompetti, 2019). Our iterative analytical process started with identifying codes in the content and led to the proposition of three central themes that we discuss in detail in the Findings section. We followed the six phases proposed by Braun and Clarke (2006):

(1) We initially *read* in chronological order all the 3,081 first-level replies to the 16 posts obtained from filtering (see above). We took initial notes about the general tone of replies and an initial assessment of users' engagement with the content. Examples of

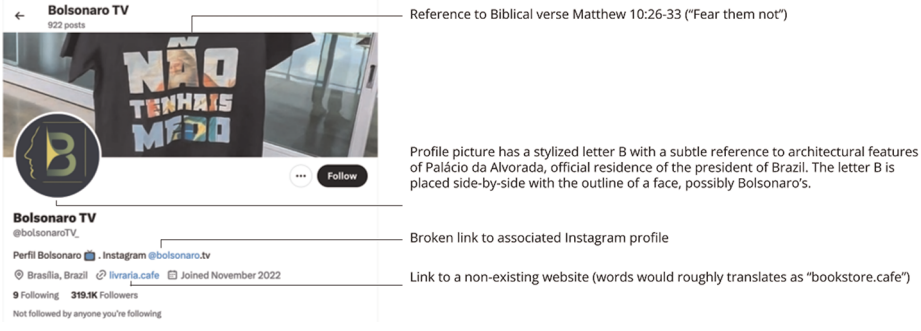


Figure 2.
Annotated screenshot of the X/Twitter profile

Source: Screenshot taken by the first author

notes included general strategies described by users to decode the messages (e.g., "zoom in 300% on the image"; "check out the associated Instagram profile for clues").

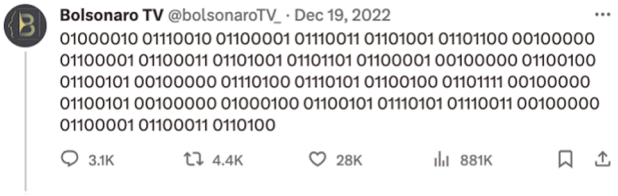
(2) In the second phase, we manually *coded* the replies following a moderately theory-driven approach based on previous research that had identified collective sensemaking practices in online communities (e.g., Russo *et al.*, 2023; Marwick and Partin, 2022; Zuckerman, 2019). Our focus was examining the extent and nature of collective reasoning among the replies.

(3) We then analyzed the codes and grouped our data into larger-encompassing *themes*. The following themes were created to describe our data:
   - search for subliminal messages in the posts;
   - searching for connections with external artifacts (other posts);
   - references from the Bible;
   - use of digital tools to devise meaning;
   - help-seeking;
   - anxiety-coping strategies;
   - self-directed meaning-making; and
   - optimistic/pessimistic interpretations of messages.

(4) In the following phase, we reviewed the themes, eliminating those poorly supported by our data (e.g., anxiety-coping strategies), while collapsing others into larger themes (e.g., use of digital tools to devise meaning and search for connections with external artifacts).

(5) Next, we defined and named the themes, presenting their narratives, illustrative examples, and rationale in the Findings section below. As part of this process, we confirmed that the three themes adequately reflected the practices distributed across our data and were specific enough to communicate the interpretive strategies employed by the social media users in our corpus.

For the authors' analysis, all data was manually translated into English by experienced native Brazilian Portuguese speakers, who edited screenshots using Google Docs' image editing tool. When editing the content for publication, we also took measures to anonymize users, attributing them pseudonyms (including for account handles) and covering their profile pictures. Although the content is public, we took further steps to anonymize the data, following current recommendations regarding using X/Twitter data (e.g., Fiesler and Proferes, 2018). Specifically, the authors checked the translated version of content to assess the likelihood that replies in this article could be found by readers using Google Translate: direct translation from English into Portuguese *should not* lead the reader directly to



Source: Screenshot taken by the first author

Figure 3.
A tweet by @bolsonaroTV_ containing an encrypted message

published content when using X/Twitter's search tool. When content could be found using that strategy, the version included in this article was slightly edited to protect users' identity while keeping the original meaning.

Findings

"In wartime, communication is also a weapon, and we need to use codes:" finding subliminal meanings in Tweets

As we will discuss in this section, users interacting with the profile found hidden meanings in all aspects of the posts: video, text, audio, and images. Those components were interpreted in many ways, such as covert attacks on political opponents and betrayers and, very significantly, *as clues about Bolsonaro being aware of—and actively planning—a coup*. For example, on January 5 (three days before the Brasília riots), @bolsonaroTV_ published a short video of Bolsonaro wandering inside a supermarket. Users interpreted that as a message: "BUY FOOD SUPPLIES" (see Figure 4). That meaning resonated with other users, some of whom extended the message from pantry items to other essential goods that can be useful in an emergency: fuel, "batteries for radios, flashlights." Notably, the footage does not contain any explicit message about stocking goods or an imminent emergency, and users resorted to their own perception of the state of affairs to conclude what the "hidden message" was. One of the users justifies their rationale by directly referencing their perception of how communication happens in wartime: "Communication is also a weapon, and you need to communicate using CODES." She goes on to request others to use their judgment to "analyze the scene," which "contains a message," she claims after laying out her thought process. In their reply, the user "connected the dots" by using her intuition about preparing for war and constructing a hypothesis of what was to come—the appeal of the message is precisely its cryptic tone.

In another example, users attempt to decipher hidden meanings in binary code. On December 19, 2022, @bolsonaroTV_ posted an "encrypted message" using zeros and ones (see Figure 5). The message would roughly translate to "Brazil above everything, God above ac4," a broken version of Bolsonaro's motto ("Brazil above everything, God above all"). Users proactively posted translations of the code, as well as tables containing binary-code-to-letter translations. However, users constructed other meanings for the message beyond simply "translating" the code to its alphabetic equivalent. One of those meanings connected the post with the potential role of the armed forces in a coup: Users referred to their knowledge of history to associate the broken part of the message with an excerpt of the Complimentary Acts ("ACs," in this case, the AC4) imposed by the military dictatorship that ruled Brazil from 1964 through 1985. In one of the replies, a user encourages people to "Read, understand, share 💛" (see Figure 5), followed by a 13-tweet thread that he published with an explanation of "Bolsonaro TV's latest riddle." The thread contains an account of how ACs worked, including "extending the duration of the martial law" previously imposed. In this case, users also seem to connect the dots by drawing on their previous knowledge about history and the need for codes in times of conflict to form their hypotheses about Bolsonaro's plans. Again, the mysterious aspect of the message is a considerable part of its appeal and leaves space for users to fill in the gaps with their own knowledge about historical facts and politics.

Those interpretations also reveal the role of a critical conceptual metaphor in reasoning about the scenario: the democratic process of transmitting power "is a war." In dialogue with Lakoff and Johnson (1980/2003), using such metaphorical language around "war" and "weapons" activates mental structures that emerge in words but have a more profound role in shaping sensemaking. In this case, the dimensions of that conceptual structure are at least

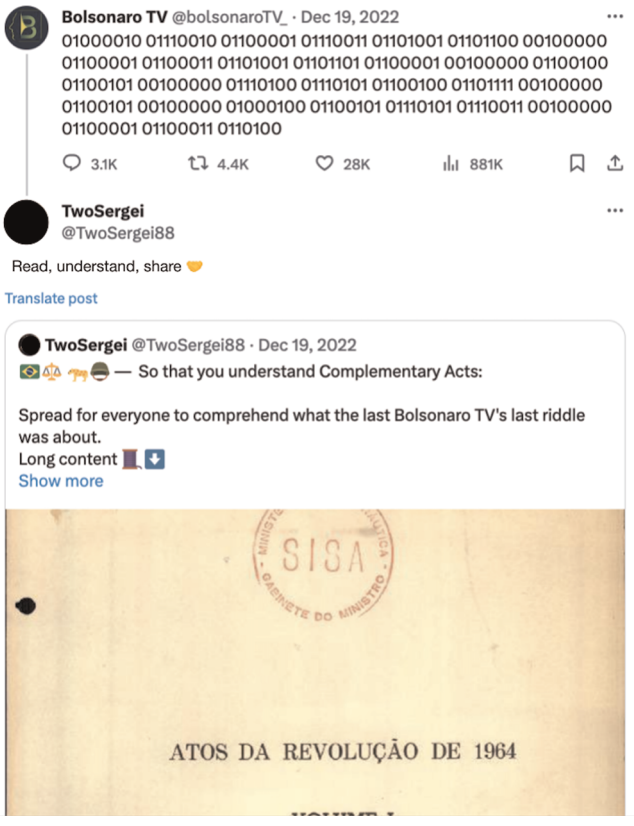
Source: Screenshot taken by the first author

Figure 4.
User identifies subliminal messages in a post published by the profile

two sets of *participants* (Bolsonaro and his supporters; nonsupporters); each side is holding a *position* and *planning strategies* (e.g., stocking up supplies, establishing a code to manipulate encrypted messages); the assumption that it will be necessary to *defend positions* (possibly with the use of "martial law"). Those stated interpretations illustrate both how users activate existing intuitive knowledge about war (a situation that the majority of Brazilians never experienced first-hand) and how they do so by relying on an interpretive framework that is heavily present in Bolsonaro's communication: *militarism* (see for example, Burity, 2021; Levy and Sarmento, 2020).

"What about this picture on Instagram today?" Finding meaning in Tweets through triangulation of references

The second set of findings builds on the search for subliminal messages and speaks to a specific approach to that task: *triangulation of references*. That strategy consists of leaving the original content to seek confirmatory or adversarial evidence in other content outlets online and then



Source: Screenshot taken by the first author

Figure 5.
User identifies subliminal messages in a post published by the profile

returning to the original content's location to evaluate it. That strategy is similar to "lateral reading," which professional fact-checkers and experts employ to identify alternative sources to the content they encounter online (Wineburg and McGrew, 2017). Users employ this approach in many ways: for example, replies contain complementary information transferred from different Instagram and TikTok accounts, legacy media websites, and even the Xbox marketplace. This section highlights how they proactively employ an agential role in collecting evidence from two posts published by the Instagram profile bolsonaro.tv. In these cases, users leave X/Twitter to find external references on other social media profiles; then, they return to @bolsonaroTV_ on X/Twitter to share the evidence with peers and collectively make sense of messages.

Figure 6 shows one of the bolsonaro.tv Instagram posts that users refer to in replies to posts on the X/Twitter profile. The picture shows Bolsonaro sitting in an office, holding a sandwich and a cup before him. For example, users refer to that post in the "period" tweet published on December 20, 2022 (see Figure 7 below). In response to the period, a user proposes that others "zoom in" on the picture to understand its meaning: the period would be Bolsonaro's reaction to "all that is happening" [after the elections] [4]. The user calls attention to the fact that the president supposedly stares at a pen at the bottom right of the picture, meaning that "a decree is about to be signed"— that is, he is about to use the power

Source: Screenshot taken by the first author

Figure 6.
Users resorting to Instagram posts to interpret tweets

he still has as a president to enforce a momentous decision. That reply initiates a discussion about other elements in the picture. A user replies by indicating the letters printed on the cup ("ART"), asking themselves whether that is an illusion or a reference to "Article." The reference to "article" is also present in a reply to another tweet that also becomes a biased semiotic discussion: "The cup has the letters "Art." In his right hand, 1 finger, left hand: 2 slices of bread + 2 fingers = 4. In the bag, 2 slices of bread. Summary: Art. 142 *BR*" [5]

Resorting to that Instagram post becomes relevant as a strategy for constructing meaning for @bolsonaroTV_'s tweets: users employ a distorted type of lateral reading. Instead of resorting to independent sources that could potentially discredit their understanding, users seek confirmation from one verified Bolsonaro social media profile. In addition, they refer to a flawed intuition (that Article 142 is a "constitutional" solution to the alleged conundrum caused by Bolsonaro's unfair defeat in the election). Those two strategies (distorted "lateral reading" and reference to an intuition) operate together to crystalize the hypothesis that a coup is underway and Bolsonaro is diligently working toward that end.

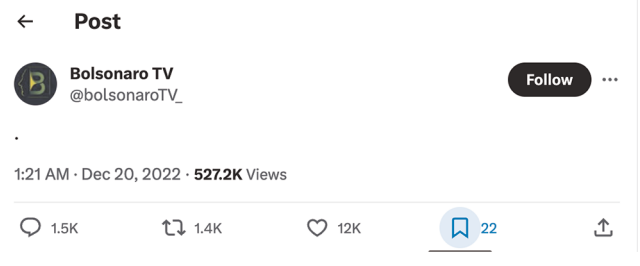
Similar interpretative work happens when users allude to another Instagram post, now as a response to the "loudspeaker" tweet. A user replies: "What about this new pic on IG? What about this new pic on IG? 23 units of plastic cups/12 glasses (Dec/23) Olive-colored curd cheese cap (?) 4 knives (representing the 3 Armed Forces + President) Anything else?" Another user replies, "The cake looks like a C for Constitution." Again, users dissect the picture, searching for clues to decode a message.

They count the number of items of each type, refer to colors displayed in the picture, and suggest connections between those and the Army ("olive green" is traditionally attributed to the Brazilian Army), as well as to the shape of the cake. All those perceived aspects are put to work in concert to hypothesize about the day of the coup (December 23), the parts involved (the president and the army), and even to conjecture that the coup will comply with the Constitution (as signaled by the cake). It is worth noting that users do not fully trust their judgments and ask for input from others (which does not happen often in our sample). However, they still formulate their hypotheses by assigning meaning to visual components of the tweet without the profile explicitly encouraging them to do so.

The examples grouped under this theme reveal how users filter information from other (confirmatory) sources in their interpretative work: distorting what is considered a healthy media reading practice, they find content that leads their intuitions and guides their interpretations. Compared to other instances documented in the literature, what stands out in this case is the intended transparency in users' thought processes as they go back and forth between the X/Twitter profile and other sources. In that process, they share their effort in interpretative work with peers in an attempt to converge toward shared meanings.

"Somebody betrayed the messiah!!!" Using the bible as an interpretative framework. The last finding relates to the instrumentalization of the Christian faith in online political expression, a phenomenon previously documented among Brazilian voters in the 2022 election (Russo *et al.*, 2023).

On many occasions in our sample, users resort to excerpts of the Bible and general knowledge and beliefs about Christianity to interpret messages published by



Source: Screenshot taken by the first author

Figure 7.
A tweet with a period published by @bolsonaroTV_

@bolsonaroTV_. As a starting point, 4 out of the 16 tweets in our corpus directly reference biblical themes. First, a sequence of three tweets published on December 20, 2022, are amateur recordings of a TV film about the life of Jesus Christ:

- In clip 1, two apostles comment on how "Jesus looks scared." One recalls that, during the Last Supper, Jesus mentioned "threats" and "treason."
- In clip 2, Jesus is tempted to give up because "no man can support such a heavy burden" and "there is a high cost in saving so many souls."
- In clip 3, the elders request Judas to confirm that he would sell out Jesus for 30 silver coins.

In addition to those, another tweet is associated with Christianity: the versicle Ecclesiastes, 3:1 – "There is an appointed time for everything and a time for every affair under the heavens."

Replies to the tweets containing the clips associate the content of the video with theories users have about the state of affairs. One of the users responds to clip #1: "Somebody betrayed the Messiah!!!" Two aspects seem especially noteworthy: First, the user promptly connects the content of the video excerpt (the mention of threat and treason in the Last Supper) with their hypothesis about the workings of a coup. He further expounds it in another reply to the same tweet (Figure 8): "I think the time has come: In the last [tweet], a period!!. But there are risks that the President has to run, we need to pray, he must be troubled because of possible backstabbers." Second, he uses the designation "Messiah," a noun whose Portuguese version is also Bolsonaro's middle name (Jair *Messias* Bolsonaro). Thus, he proposes a direct connection between their knowledge of Christ's biography and their hypothesis about the role of the former president in "liberating" Brazil: "@jairbolsonaro it was Him the Lord who raised you for this time of liberation, make Him your refuge coz He'll provide victory." That impression of "martyrdom" is present in comments to that reply. One user said, "The system is a bitch. I think he did everything he could. And the scene repeats. They are gonna crucify [him]!" This user builds on the connection between Bolsonaro and Jesus to feed their deductive logic chain to "predict" the result of the former's challenging "the system": crucifixion.

These examples show how users build on the profile's explicit mention of Christianity to generate and justify explanatory theories; however, our sample also contains examples where users "take the initiative" of resorting to their faith to interpret messages that do not explicitly encourage that connection. For example, one of the posts features an old, black-and-white picture of a boy and a grown-up showing off a large fish hanging from a hook (Figure 9). According to Bolsonaro, the picture showed him and his father displaying a *traíra* fish (Jair M. Bolsonaro [@jairbolsonaro], 2020). Due to the ambiguity of the name of that fish species [6], users did not hesitate to connect the picture with the potential existence of backstabbers (a synonym of "*traíra*") within Bolsonaro's circle. However, some users interpret that message indirectly.

In this case, the user conflates two topics (religion and homeland betrayal) to articulate their theory of what that picture represents. They resort to Catholic symbolism and metaphors—God as the "father" who provides one with strength and protection, an image that also alludes to the traditional role of the father within the family unit. Also note that both the post and the comment were published on December 29, 2022 (10 days before the Brasília riots), which some participants viewed as a collaborative effort between laypeople and authorities. To this point, also note that rioters recorded police officers' consent of mob behavior on January 8 (for audiovisual content that exemplifies that consent, see

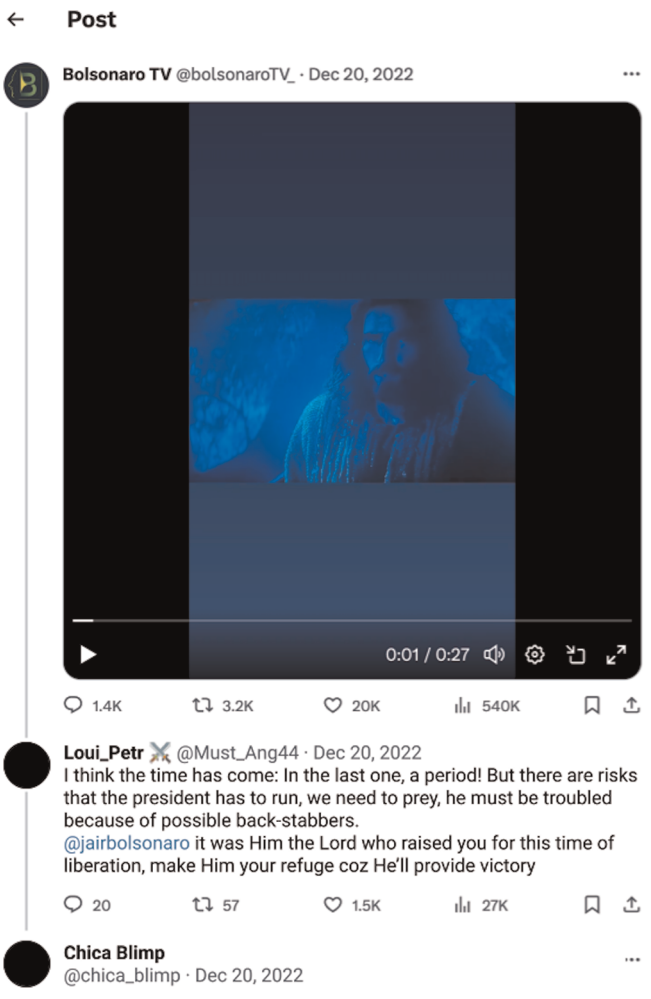


Figure 8.
Users resort to Christian symbolism to interpret messages

Source: Screenshot taken by the first author

Boadle *et al.*, 2023). It seems that, for that user, Bolsonaro is trying to convey the message that "the job is already done" ("the communist betrayers have already been hooked"), and people are invited to celebrate the achievement.

In this section, examples suggested the instrumentalization of Christianity (as seen with the film excerpts) and as an interpretive framework that shapes users' reasoning (in the case of the alternative interpretations for the picture with the *traíra* fish). Bolsonarist weaponization of religion on social media has been documented elsewhere (e.g., Cunha, 2023), and here we demonstrate how public discourse contributes to that weaponization

Source: Screenshot taken by the first author

Figure 9.
A user resorts to Christian symbolism to interpret a tweet not directly related to religion

upon priming by a subtle cue (the *traíra* fish picture). In this case, one might infer that no connection to religion was intended; still, users resort to religious symbolism in decoding the message. Lakoff (2002, 2016) identified that family metaphors in the USA provide a comprehensive framing through which people reason about morality and politics. In the interpretation seen above, the father (representing the Christian god) has already "hooked the betrayers of the homeland"; Bolsonaro, in this case, would be God's son, a metaphor that is compatible across both cases, as seen in the user's drawing the name comparison between the former president and Jesus (as indicated by the "Messiah" in his name).

Discussion, implications and conclusion

This article examined how Brazilian followers of @bolsonarotv_ engage in agentic *emergent collective sensemaking processes* leading up to the January 8th riots of Brasília. We identified specific learning mechanisms abundantly used in the original tweets and the hundreds of responses to them. Examining those learning mechanisms, we found some recurring patterns:

- Asking users to engage in triangulation by actively searching new content on other social media and external sources, such as the Bible, and their knowledge of Christianity.
- Adding statements from anonymous users claiming deep expertise in a topic.
- Writing intentionally cryptic posts that incentivize followers to scrutinize for subliminal messages and find hidden, encoded meanings in them.

These patterns, ironically, all rely on users *actively finding and making sense of information and creating their own explanations for political events*—an efficient but "twisted" form of constructivist learning—leading one to ends contrary to the democratic conceptualizations of education by humanists such as Paulo Freire. This form of learning, unfortunately, might be a significant component of how people have been acquiring political knowledge in mainstream online spaces. We documented examples of people gathering online, devoting time to study together, "doing their own research"—but their learning takes an undesirable turn: concrete threats to democracy.

Based on these *learning moves* and recurring patterns, we propose that it is not mere coincidence that social media platforms have been exceedingly efficient at spreading political misinformation: the very affordances of these platforms give rise to a learning environment that is particularly conducive to those *learning moves*. Our discussion, thus, will be divided into two parts. Adhering to our initial goal of bringing together the literature on media studies and learning sciences, in the first part, we will infer the characteristics of social media as a learning environment that incentivizes the learning moves we documented. The second part will discuss implications and possible actions for educators, policymakers, regulators, and tech companies.

Social media as an autonomous learning environment

Given social media's informational, social, and technological architectures, how could it be portrayed as a "new" learning environment? What specific *enabling characteristics* allow social media to lend itself to this type of efficient but undesirable learning, as revealed by the learning moves detected in the tweets? In the following, we discuss five enabling characteristics:

(1) Anonymity of peers.
(2) Information superabundance.
(3) Brevity and rapidity in communication.
(4) The tendency to facilitate confirmation bias.
(5) The weaponization of data voids.

One of the enabling characteristics of social media is the *anonymity of peers* with whom one learns, a critical difference compared to other learning modalities. In social media, a highly decentralized setting, the notion of domain mastery is blurred, and there is no way to ascertain the actual expertise of anonymous peers. Complete novices might claim knowledge about topics as complex as constitutional law—see, for example, users' interpretation of Article 142, which served as a center point for devising theories of how a *coup d'état* would be paradoxically legal in Brazil. Alternatively, in another example from our data set, in trying to interpret the binary code posted by @bolsonarotv_, users received input from peers supposedly versed in cryptography (who tried to "crack" the code using direct translation into its alphabetic correspondent) and in law (such as the user who created a long

thread about the martial law during the most recent dictatorship). However, the knowledge and expertise of these peers are impossible to ascertain in such a context. Rajendra-Nicolucci and Zuckerman (2021) resort to the metaphor of a public square to describe the performative and politically unstable character of X/Twitter. It might be the case that, following this metaphor, many snake-oil salesmen take over the town square and turn their sales pitch into seemingly cohesive participatory lectures.

A second enabling characteristic of social media is its *information superabundance* and lack of curation. It is possible to find "anything" on social media, from flat-earth videos to reptilian aliens' plans to take over the planet to proof that humans never went to the moon. In their pivotal work, Greenhow *et al.* (2009) highlighted learner participation, creativity, and online identity formation as key to learning on the then-called Web 2.0. Transposing those themes onto current-day, algorithm-driven social media, we note that, unlike conventional peer-learning contexts or professionally designed online courses, learners find and collect scattered bits of information with a high degree of autonomy on today's information-saturated social media. *One can find anything in this infinite pool of uncurated information* (including information planted by pernicious actors) but with little data about credibility or origin. Our findings surfaced many such instances. For example, after reading cryptic tweets from @bolsonaroTV_, users searched for evidence in other online spaces and then returned to X/Twitter with evidence from Instagram that—they argued—corroborated their interpretation. Our data shows that an appropriately motivated user can easily find "evidence" that seemingly confirms their specific arguments, and, in doing so, they may enjoy the epistemic emotion of enjoyment for having achieved some form of learning (see Vogl *et al.*, 2021; see also Muis *et al.*, 2015). In other words, in this context, the internet is akin to an uncurated library with infinite books containing all versions of any fact, rendering the very act of "doing your own research" meaningless.

A third enabling characteristic of social media is the *short and rapid communication,* favored by most platforms' social and technological protocols. Our study showed how, in this right-wing conspiratorial context, @bolsonaroTV benefitted from the brevity and rapidity of communication on X/Twitter, engendering much engagement around short, cryptic content like puzzles to be solved (e.g., counting the number of fingers in a photo, or the writing on a mug), generic Bible-inspired mottos (e.g., "do not be afraid"), and short suggestive videos (e.g., Bolsonaro in a supermarket). In more conventional learning environments, no instructor would get away with showing a 7-s video and asking students open-endedly to find the "hidden meaning" within. Nevertheless, this is precisely what social media makes possible: *enigmatic, nonsensical, and ambiguous media pieces serve as a Rorschach test for users to interpret and derive meaning from* (see, e.g., Katz and Shifman, 2017).

At the same time, users are not making sense of the message in an unbiased environment, which leads us to the fourth enabling characteristic, which is social media's *tendency to facilitate confirmation bias* through ideologically polarized information outlets—a result of both algorithmic recommendation and a "human infrastructure" of radicalization operating in Brazil (Nemer, 2022). Fletcher *et al.* (2020) challenged the notion that algorithmic "filter bubbles" are the main drivers for the polarization of online audiences; for instance, their research in the UK found that social media can actually lead to more diverse news repertoires (Fletcher *et al.*, 2023). The present study, in the Brazilian context, indicates that users were indeed looking for evidence beyond their X/Twitter feeds (e.g., on other platforms or news outlets). However, the evidence they sought was confirmatory, strengthening their hypotheses. Our evidence is aligned with previous studies (Nielsen *et al.*, 2020; Recuero *et al.*, 2022), suggesting a pattern of confirmatory bias facilitated by social media.

A fifth enabling characteristic is the easy *weaponization of "data voids"* (Golebiewski and boyd, 2019). One of the documented strategies that media manipulators employ to promote extremist agendas is the introduction of specific terms in their communication to broader audiences after having carefully populated the Web with misleading references to these terms—references that rank well in search engines due to the obscurity of these terms. Those terms may be either newly crafted, existing ones can also acquire new connotations in this deliberate and strategic way. For instance, in our data, "Article 142" might belong to the latter category: it is an existing term from Brazilian legalese that has existed since 1988, but it had been "dormant" until these recent periods of political agitation. Now, a search on YouTube reveals many videos that promote the article as a sort of political "wild card" ensuring the legitimacy of a military *coup d'état*.

As shown powerfully by this potential data void example ("Article 142"), upon being primed by social media, users started to assemble their theories in a process reminiscent of Tripodi's (2022) concept of the "IKEA effect" of misinformation: similar to the satisfaction of having assembled a piece of furniture by yourself by following carefully designed instructions, *there is a feeling of satisfaction from having collectively assembled clues together to reach one's own conclusions,* even if the clues are carefully and deceitfully spread in such way that only one conclusion is possible. Here, the epistemic feeling of curiosity, which is thought to be associated with exploratory behavior (Litman *et al.*, 2005; Vogl *et al.*, 2021), might be leading users through a guided search for truth that leads them along a ready-made trail toward radicalization. Although the IKEA effect of misinformation refers to broader networks of communication, here, too, users leave X/Twitter for a cognitive scavenger hunt outside to return with clues that help them put together a puzzle.

The examples we include in this paper show several ways these enabling characteristics generate this different type of (twisted) sensemaking that happens on social media. Previous literature reviews of learning with social media in K-12 and postsecondary education reported gains in social learning and engagement with content (Greenhow *et al.*, 2020), including in the specific case of X/Twitter (Tang and Hew, 2017). That deep, sustained engagement is also seen in our data. The problem arises when ill-intentioned groups understand how to use this infrastructure and its enabling characteristics in favor of harmful agendas.

Our study also presents some limitations that need to be acknowledged. A fundamental one derives from the chosen methodology, which allows for an *in vivo* analysis of phenomena but limits our claims to inferences based on what users post publicly. With that evidence, we can make conjectures about how they perceive their epistemic processes (e.g., as agential) but cannot go further. Building on this work, future research could include participant-centric methods like interviews, aiming to surface users' thought processes, motivations, and self-perceptions in such contexts. Interview-based research could also examine the role of emotions such as fear and (un)certainty in shaping social media users' epistemic agency. Epistemic emotions like those, in addition to social conformity, are thought to serve as a bridge between the intuitive and analytic system (de Sousa, 2009), and future work could look at that interplay in the unstable and emotionally charged Brazilian political landscape.

Implications

As a learning environment, we identified that social media has some unique characteristics that starkly contrast with more traditional spaces like classrooms, such as anonymity and information over-saturation. Although our research does not address the context of formal education, our findings point to a crucial concern related to the intersection of social media

and learning. As people spend more time on social media, interactions like the ones documented in this paper might encourage a form of reasoning that leads to extremism and radicalization. Children might still have some counterbalance through classroom instruction, but adults might not have that option. That concern is convergent with established evidence of pathways to radicalization on social media (e.g., Ribeiro *et al.*, 2020). While our study cannot trace causal relationships between interactions in that X/Twitter profile and the January 8, 2023 riots, our data shows at least a stated predisposition in questioning the legitimacy of democratic and peaceful alternance of power (see, e.g., the references to complementary acts passed during the military dictatorship in Brazil, and references to political opposites as rivals in a war). One can only imagine the cumulative effect of this process in future elections.

Our work indicates that it is not enough to enact more comprehensive regulations of social media platforms, especially in countries in the Global South (where tech giants systematically violate consumer rights, Takhshid, 2022). Even increased attention on recommender algorithms used in social media—which might favor extremist content—is insufficient (Fisher, 2021). Only a concerted effort between educators, policymakers, and regulators could make a dent in this expanding industry of political misinformation—and that might take a generation.

No regulatory framework would fix the anonymity of the web or the oversaturation of information. However, we could imagine integrating classroom conversations in K–12 education in which teachers explicitly address these issues. We could envision, for example, curricula in which those misinformation scenarios are enacted on purpose in classrooms: children could play the role of the "anonymous expert" in a classroom discussion, demonstrating the absurdity of relying on anonymous posts for expertise. Teachers could also create activities where children would go online and find "hard" evidence for the most spurious ideas, showing how the web is oversaturated with flawed content and data voids. Thus, for educators and curriculum designers, competing with social media as its own "school" will require creativity and new strategies.

Regulators would still have an important role, creating frameworks to make it harder to spread ideas online anonymously. Recent efforts such as a new law for social media, proposed by the Brazilian Congress, could be positive advances (Google fiercely opposed the law, and, for now, it has no viable path forward). However, tech companies might be among the most critical players in addressing the misinformation epidemic. As adults move to social media as their primary learning environment, changes to K–12 education will take decades to take hold. This requires changes to algorithms, more rigorous policing of online content, and entirely new business models.

In the early days of the web, there was general excitement about the democratization of information and the fact that we could all learn new things on our own, outside of the shackles of traditional education. But there was a missing piece: good constructivist education requires competent facilitation. Allowing people to swim in an online ocean of superabundant, uncurated information, even with interaction and collaboration with others, will not necessarily generate the type of learning that we expect for the maintenance of a democratic society. *The exact learning mechanisms that lead people to positive critical thinking also can lead them to radicalize online.* The difference is in who the facilitators are, their preparedness, and their ethics. We hope that the current study laid out a foundation for understanding that these seemingly unimportant X/Twitter interactions are the *de facto* "classrooms" of politics for millions of adults. Momentous and courageous action—by companies, regulators, governments, and educators—is needed to counter their aggregate effect before it is too late.

Notes

1. Although it has since been rebranded as "X," in this paper, we refer to the platform as "X/Twitter" because that was its official name at the time of data collection.
2. See, e.g. Occupy Democrats (2018) and Nick Adams (2020) for examples of how people adhering to opposite political strands employ similar reductionist arguments when referring to lack of intelligence and agency of their counterparts in the other side of the political spectrum; see Hartman (2023) for a comprehensive discussion of the wide outreach and implications of the tendency of identifying *sheepleness* in outgroup members.
3. Bolsonaro TV is a simple mobile app that aggregates content originally published on Jair Bolsonaro's YouTube and Telegram channels.
4. Similarly to one of its colloquial meanings in English, in Portuguese, the word "period" is sometimes employed to mean "end of the matter", or "enough is enough."
5. Article 142 does exist in the Brazilian Constitution and has been often cited to be a key for a "legal" coup under Bolsonaro. It states that "the Armed Forces [. . .] under the supreme authority of the President of the Republic, and are intended for defense of the Country, for the guarantee of the constitutional powers (the executive, legislative, and judicial) and, on the initiative of any of these, law and order." There has been much debate about misinterpretations of Article 142 being used with political purposes. More information in English: https://bit.ly/3B4lCTT
6. "Traira" is also Portuguese slang for "backstabber".

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