



## Lexical Patterns of Religious Conservatism: A Study of Social Media Reactions to an Art Exhibition in Brazil

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This study examines the dynamics of hate speech on social media, focusing on comments opposing the announcement of the Queermuseu – Cartografias da Diferença na Arte Brasileira (Cartographies of Diversity in Brazilian Art) exhibition in southern Brazil. Employing appraisal system, Systemic-Functional Linguistics, and network analysis, the research investigates the linguistic and semantic patterns underlying the interactions. Lexical and interaction networks were qualitatively interpreted in order to understand the interaction amongst users and the reaction towards such exhibition. Results reveal that conservative discourse significantly drives comments towards negative evaluation, framing the exhibition as a threat to religious and traditional family values. This research contributes to understanding the role of digital platforms in amplifying intolerance and the mechanisms of polarized discourse in Brazilian Portuguese.

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Cette étude examine la dynamique des discours de haine sur les réseaux sociaux, en se concentrant sur les commentaires opposés à l'annonce de l'exposition Queermuseu – Cartografias da Diferença na Arte Brasileira (Cartographies de la Diversité dans l'Art Brésilien) dans le sud du Brésil. En utilisant le système d'appréciation, la Linguistique Systémique-Fonctionnelle et l'analyse des réseaux, la recherche explore les schémas linguistiques et sémantiques sous-jacents aux interactions. Les réseaux lexicaux et interactionnels ont été interprétés qualitativement pour comprendre les interactions entre les utilisateurs et les réactions face à cette exposition. Les résultats montrent que le discours conservateur alimente largement les commentaires à travers une évaluation négative, présentant l'exposition comme une menace pour les valeurs religieuses et familiales traditionnelles. Cette recherche contribue à la compréhension du rôle des plateformes numériques dans l'amplification de l'intolérance et des mécanismes de discours polarisés en portugais brésilien.

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## 1. Background

This article aims to discuss the lexical choices in hate speech on Facebook. It focuses on analyzing network interactions and comments in Brazilian Portuguese published in response to the announcement of the exhibition *Queermuseu – Cartografias da Diferença na Arte Brasileira* (*Queermuseum – Cartographies of Difference in Brazilian Art*; hereinafter *ExpoQueer*). This paper aims to address the following research questions:

1. How does religious discourse shape the narrative of opposition in online hate speech against LGBTQIA+ events, specifically in a social media platform?
2. What are the key lexical and semantic patterns used in the hate comments against *ExpoQueer*, and how do these reflect broader societal and religious values?

This paper's focus is the instantiation of language patterns, and its main background lies in *appraisal theory* (Martin and White 2005), which draws on *Systemic-Functional Linguistics* (hereinafter SFL) (Halliday and Matthiessen 2014) to establish the scope of a system that includes the potential positive and/or negative attitudes of language users towards something or someone (Martin and White 2005). In this perspective, language mirrors value systems through socially motivated linguistic choices related to their context of use (Alba-Juez and Thompson 2014).

Appraisal theory comprises three subsystems. The first is *attitude*, which aims to map feelings as they are constructed in the text. Attitude comprises three subsystems: (1) *affect*, responsible for expressing positive and negative feelings; (2) *judgment*, focused on attitudes towards behaviours, which one may admire, praise, criticize, or condemn; and (3) *appreciation*, related to our positions regarding an aesthetic point of view.

*Engagement*, in turn, is a system that offers possibilities for appreciating the positions and values that are referenced in the text and concern those to whom they are addressed. They are, therefore, resources available for writers/speakers to express their voices in the interactive process, considering their respective rhetorical effects. In this sense, a text results from interaction with several other texts and voices. This system is thus responsible for the systematic processes of how such positions are instantiated linguistically (Martin and White 2005, 93).

This system enables the text to be constructed in terms of heteroglossic alignment or non-alignment with alternative points of view. As a result, each text might be different in terms of its stance towards diversity of opinion and dialogue. Each text might also be either dialogically closed (averse to dialogic alternatives) or expansive (receptive to alternative positions) (Martin and White 2005).

Lastly, *graduation* can be defined as a form of intensification or mitigation of meanings instantiated in the other systems. This system is realized through two mechanisms, *force* (defined in terms of the quantity or intensity of the evaluation), and *focus* (established in terms of prototypicality and precision). As claimed by Lima-Lopes and Vian, Jr., *focus* defines categories that operate taxonomies that define the specificity of participation, and *force* should cover meanings that can be quantified and intensified (Lima-Lopes and Vian 2007).

The analysis developed in this article will focus on the attitude system, due to the nature of the comments, which strongly condemn the exhibition, sparing from criticism neither the museum nor the sponsoring bank.

As noted by Thompson and Alba-Juez, analyzing appraisal should account for a number of factors (Thompson and Alba-Juez 2014). First, such a process is preceded by a cognitive movement related to deciding whether to carry out the appraisal process. Such decision are based on experience, reflecting elements of intertextuality, discourse, and communicative competence. Thompson and Alba-Juez also point out that appraisal has multiple aspects and often requires more than one parameter or theory to understand the phenomenon (Thompson and Alba-Juez 2014), even when relying on solid models, as is the case of the system developed by Martin and White (Martin and White 2005).

It is due to this dynamism that this paper draws on studies in the area of communication, especially on the use of the Facebook platform and network science, as a means to develop theoretical-analytical tools that enable a more in-depth understanding of how the exhibition is appraised.

At first, it is natural to associate the use of social media to the interaction between individuals, especially in the development of personal and emotional ties. Zell and Moeller apply the mass personal capitalization system to the use of Facebook and, indeed, observed that receiving a greater number of likes is directly related to increased self-esteem and greater participation in discussion groups, thus affecting the very perception people have of social media (Zell and Moeller 2018). It is also observed that the desire for communication between individuals in these networking sites is motivated by their experiences in the offline world (Ross et al. 2009).

It is also important to observe the possibilities of social organization offered by the web. There are iconic examples, such as the Arab Spring (Castells 2015), the June 2013 protests in Brazil (Winters and Weitz-Shapiro 2014), the *#metoo* movement (Lang 2019), and *#Blacklivesmatter* riots and protests (Szetela 2020), which show the possible effects and power of the internet. According to Warren, Sulaiman, and Jaafar, activists view social media as tools that enable five modes of engagement: (1) collection of information, applied to searching for militancy events and news; (2) publication of

information, shared through different means on Facebook; (3) dialogue, holding direct discussions; (4) coordinating action, creating coalitions and events; and (5) lobbying, influencing political decisions through popular pressure (Warren, Sulaiman, and Jaafar 2014).

However, it is important to note that not every form of internet organization stems from its civic or interpersonal potential. According to Hoffman, the internet has been, since its early days, an important centre of ideological dissemination for conservative and extremist groups (Hoffman 1996). Hoffman observes that the large right-wing conservative groups in the United States provide ample space for participation and recruitment of new participants on the internet, thus generating a new type of hate activist: digitally literate, active, and, consequently, able to seek information online, but, contradictorily, manipulated by an ideological primer (Hoffman 1996). Much of this comes from the fact that the internet is a cheap and easy-to-use technology in comparison to other forms of recruitment.

This reality has also reached social media. Ben-David and Matamoros-Fernandez undertake a longitudinal study aimed at understanding how hate speech and discriminatory practices circulate freely on Facebook. The authors conclude that the presence of communities that nurture hate speech is not only due to personal motivations, but also stems also from the platform's lenient policies and the technological possibilities (Ben-David and Matamoros-Fernandez 2016). Rauch and Schanz study the relationship between Facebook use and the acceptance of racist posts (Rauch and Schanz 2013). Their results show a correlation between the frequent use of this media—especially for entertainment—and the acceptance of racist content, contrasting with individuals who use the site to search for information, who tend to reject racist posts more often.

It should also be added that with the popularization of internet and social media, misinformation and disinformation have become relevant issues (Wu et al. 2019). At first glance, what stands out is the inability of internet users to tell such news apart (Domonoske 2016). In a comparative study, Graeupner and Coman show that superstition and misinformation are the main factors that lead individuals to believe in fake news (Graeupner and Coman 2017). Strong beliefs and social exclusion lead readers to endorse conspiracy theories, making them unable to question what is read. As they are so deeply immersed in their convictions, they cannot analyze facts objectively (Graeupner and Coman 2017).

This work is also based on *network science*, an interdisciplinary field of wide scope that aims to study the constitution of networks as a phenomenon. As described by Scott, it represents individuals or groups by nodes and their relationships by connecting lines,

or edges (Scott 2013). Its main concern is to analyze the mathematically and visually expressed patterns to understand how the relationship between those different nodes is constituted. Depending on the metrics used, such relationships form graphs with intersecting lines that vary in thickness, connecting different points according to their size or colour. A key concept is the perception that all relationships within the most diverse scientific fields can, in some way, be expressed by network relationships (Barabási 2002).

It is important to note that network models developed are widely used in several fields such as social science, biology, marketing, and political social, with universally applicable basic concepts and calculations (Barabási 2002; Dodds and Watts 2005; Watts 2004). Since SFL assumes that language studies should be considered an applied social science (Stubbs 1996), the use of methodologies based on network science can be important to analyze the nature of interactions. This is so because network science is founded on approaches developed in anthropology and sociology to search for actual patterns of interaction and interconnection through which individuals and groups interrelate (Scott 2013).

This article is part of a series of studies examining the relationship between network communication and social movements. In the Brazilian context, a close connection between social movements and social media originated during the so-called Brazilian “2013 June Journeys.” Peruzzo argues that this movement results from a necessity to express political discontent and to address long-standing demands from various social movements and probably took the Arab Spring as an inspiration (Peruzzo 2013). A result of such protests was the platformization of Brazilian political discussion at the daily level, intensified through internet social media.

This research understands the importance of social media as an agora for Brazilian society, takes appraisal system as a theoretical background, and advocates in favour of network science as both a means of understanding context (as it takes network representation of interaction to model interaction and observe the relevance of specific media profiles) and discourse (as it takes a collocational network-based representation as a semantic model of language choices).

Following this tradition of using social media interaction networks as a way of understanding political discussions in Latin America, as well as their application in discourse analysis in general, one might highlight the research by Lima-Lopes; Gabardo and Lima-Lopes; Mercuri and Lima-Lopes; and Lima-Lopes, Mercuri, and Gabardo (Lima-Lopes 2017; Gabardo and Lima-Lopes 2018; Mercuri and Lima-Lopes 2020; Lima-Lopes, Mercuri, and Gabardo 2020). Lima-Lopes studies the use of Whatsapp groups in communities of practice. In his analysis, the author demonstrates

that the different discursive roles assumed in the community are directly related to each member's role in the messaging network, with a relationship between what is said and centrality metrics (Lima-Lopes 2017). Gabardo and Lima-Lopes, for their part, study how pro-abortion movements use network strategies (Gabardo and Lima-Lopes 2018). For the authors, language simplification and network propagation strategies are relevant to the movement's success. Lima-Lopes, Mercuri, and Gabardo reflect on how political groups react to agencies that verify processes of disinformation. The authors make an important connection between analyzing hashtag networks as defining the semantic field of interaction, showing that, in Brazilian society, their use goes beyond indexing and takes on discursive overtones. Finally, Mercuri and Lima-Lopes explore how digital populism leverages hate speech on social media to polarize public opinion and manipulate the public (Mercuri and Lima-Lopes 2020). By analyzing political movements on platforms such as Twitter, the authors demonstrate how certain actors, especially politicians from right-wing groups, used hate speech as a tool to vilify political opponents, like the Workers' Party (PT) in Brazil, during the lead-up to the 2018 elections.

Doerfel surveys different approaches to semantic networks, comparing research methodologies (Doerfel 1998). The author divides the approaches into three main categories: (1) word associations within texts, (2) semantic networks constructed from traditional content analysis, and (3) networks based on perception scales. Word association analysis is the methodology chosen in this article due to its objectivity. According to Doerfel, such a methodology examines how words co-occur in texts, representing the semantic associations (Doerfel 1998). It offers the possibility of visualizing a network of interconnected meanings between words. In this, conceptual structure emerges from the texts as it preserves the original relationships between words, offering an objective analysis of textual content.

The analysis of collocation networks is based on the research by Phillips (Phillips 1989). Danowski presents a methodology based on semantic networks, focusing on identifying and quantifying relationships between words in large volumes of text (Danowski 1993). The results emphasize that this approach allows connections to be mapped, creating semantic clusters that reveal textual content structure in more detail than some other traditional methods. Danowski has shown that using the co-occurrence of words in text windows makes it possible to identify groups of terms that frequently appear together, which offers insight into the main themes and conceptual relationships in the analyzed content. The research analyzed listener responses about their favourite radio stations, generating a semantic network that revealed how different stations were associated with musical genres and listener

preferences. Another important application was in analyzing newspaper texts about a US airstrike in Libya, where the results showed the words most frequently associated with the event and helped to reveal how the attack was framed in the Spanish media. Danowski concludes that content network analysis offers a robust and efficient way of capturing the semantic richness of texts (Danowski 1993).

Phillips emphasizes the importance of specific, predictable, systematic patterns of lexical association, defined as collocations, in text meaning and organization as they contribute to the overall textual coherence (Phillips 1989). Phillips's research on lexical patterns as structured combinations was central to a number of studies exploring quantitative analysis of collocations in different linguistic contexts. Brezina and collaborators built upon Phillips's framework by visualizing collocations as networks (Brezina, McEnery, and Wattam 2015). Their argument is that such collocations do not merely co-occur in isolation, but also form part of the more extensive lexical system. In other words, each collocation pattern would represent lexical structures that either connect to other patterns or are part of different collocational structures. Brezina and collaborators' network-based approach extends Phillips's notion by mapping out the relationships between patterns across a text (Brezina, McEnery, and Wattam 2015). Similarly, Gablasova and collaborators examine how native and second-language speakers acquire and use collocations (Gablasova, Brezina, and McEnery 2017). They show that collocations are essential for fluency and represent a significant challenge for learners. Gablasova and collaborators highlight that learners benefit from understanding collocations as fixed structures rather than independent words, which supports Phillips's theory that lexical structures are paramount for text comprehension (Gablasova, Brezina, and McEnery 2017).

There are some studies that use collocational networked representation of lexis for analyzing discourse in a SFL approach. Some examples are Lima-Lopes (Lima-Lopes 2017; Lima-Lopes 2019), who reflects on network science and its contribution to the analysis of register; Pimenta and Lima-Lopes (Pimenta and Lima-Lopes 2017), who study sexist patterns related to transitivity and appraisal; and Gabardo and Lima-Lopes (Gabardo and Lima-Lopes 2018) and Lima-Lopes and Gabardo (Lima-Lopes and Gabardo 2019), whose goal is to reflect on a feminist movement on Facebook. Studies like Mercuri and Lima-Lopes (Mercuri and Lima-Lopes 2020), Mercuri (Mercuri 2021; Mercuri 2022), Lima-Lopes and collaborators (Lima-Lopes at el. 2020), Lima-Lopes and Arruda (Lima-Lopes and Arruda 2021), Lima-Lopes and Souza (Lima-Lopes and Souza 2023), Mercuri (Mercuri 2018), and Lima-Lopes (Lima-Lopes 2020; Lima-Lopes 2022a; Lima-Lopes 2022b) are just a few examples of how social media and political stance are, at least for the last eleven years, deeply connected in the Brazilian society.

For Mercuri and Lima-Lopes and Rodrigues and Ferreira, combining the internet and politics is an important piece in a new phenomenon in Brazilian society called *digital populism* (Mercuri and Lima-Lopes 2020; Rodrigues and Ferreira 2020). The two studies have different results regarding strategies followed by left and right parties, but both agree that social media is a tool for promoting social panic and engagement in political causes.

Disinformation plays a key role in understanding opposition to the rights gained by minority groups. For instance, Lima-Lopes investigates how negative feedback and biases target the inclusion of Black individuals, transgender people, and immigrants in Brazilian federal universities (Lima-Lopes 2020). Health-related disinformation is addressed by Soares and collaborators, who focus on misleading information during the COVID-19 pandemic (Soares et al. 2021). Meanwhile, Lima-Lopes and Souza explore recent immigration issues by analyzing Twitter discussions surrounding the murder of an immigrant in Rio de Janeiro (Lima-Lopes and Souza 2023).

According to these studies, some general principles apply to the Brazilian context:

- The use of social media is part of the political spectrum.
- Virtual lynching strategies are present in the political spectrum.
- Hate language through dehumanisation is a common strategy.
- Replication of hate messages is a common strategy during swarms.
- Minorities or minorized groups are a constant target of hate language.
- Participants tend to bypass fact-checking while replicating content.

Besides, this new Brazilian populism has a close relationship with religious discourse. As Cunha points out, religion and social fears are essential in shaping political strategies from the 2018 Brazilian presidential elections on (Cunha 2020). The author introduces two critical concepts: *Retórica da Perda* (Rhetoric of Loss) and *Aliados dos Evangélicos* (Allies of the Evangelicals). These strategies converged religious and secular narratives to emphasize tradition, security, and the preservation of social values perceived to be under threat. This paper takes key arguments by Cunha and Mercuri and Lima-Lopes to throw some light on the relationship between populism and social media (Cunha 2020; Mercuri and Lima-Lopes 2020). The 2018 Brazilian presidential elections are essential in the relationship amongst social media, hate language, and religion. If, on the one hand, most of the strategies used by conservative groups today were designed during this period, there is still a need to understand how they were introduced in the social media context. The *ExpoQueer* exhibition is a fact of relevance in such a scenario, as it was one of the first times a public event was cancelled due to internet repercussions in Brazil.



However, the relevance of *ExpoQueer* swarms is not only because it is the beginning of a tendency in which civil society responds to the demands of swarms on social media. It reflects the influence of ultra-conservative religious movements that directly oppose any artistic, cultural, or political expressions associated with the LGBTQIA+ community. As Oliveira and collaborators point out, evangelical discourse in Brazil shows resistance to inclusion and sexual diversity policies (Oliveira et al. 2016). According to the authors, evangelical leaders reinforce heteronormativity on social media in order to promote a conservative view using moral, pseudoscientific, and religious arguments, and offering resistance to LGBTQIA+ anti-discrimination policies. Senger's study follows a similar path, discussing the reality of violence faced by such a community in Brazil (Senger 2015). The author analyzes the concept of homophobia and maps the bills and public policies that face resistance from evangelical groups. For Senger, Brazilian religious discourse reinforces heteronormativity and condemns homosexuality, which is a factor that prevents the approval of measures that seek to criminalize violence against the LGBTQIA+ community (Senger 2015).

In most cases, as Carvalho points out, hate speech against this community is treated as free speech (Carvalho 2021). Consequently, it is considered a right by evangelical communities that consider verbal and physical violence against LGBTQIA+ groups a religious imperative. Silva and Buttignol explore the intersections between homophobia, political conservatism, and religion, focusing on Brazil between 2018 and 2022 and examining campaigns promoting the "cure" of homosexuality and the influence of religious discourse on social media (Silva and Buttignol 2024). The research also examines how conservative politics strengthened homophobic narratives and increased the visibility of these practices, demonstrating the connection between faith and the repression of sexual minorities.

In this paper, data was surveyed using Facebook's API. Netvizz (Rieder 2013) was used to scrap both the interactions and relationships between words and the formation of clusters that can lead to the observation of language patterns. At the time this data collection was conducted, Netvizz was a piece of software available under Facebook's research program, and, therefore, in accordance to the platforms conditions of use. The research followed the ethical recommendations for research in social media in Brazil.

Despite the importance of quantitative data analysis in social media, and the fact that this is not necessarily a new approach, it is important to note that its use in Brazilian applied linguistics is still relatively recent and uncommon. As authors such as Freitag and collaborators pointed out, the development of quantitative methodologies is still met with much resistance, given the qualitative tradition of linguistic analysis (Freitag et al. 2021). According to the authors, discussion based on prototypical examples has

been the standard without considering metadata or the relevance of posts within swarms. In other words, few studies take a quantitative approach as a premise or delve into either the context of network analysis or lexical analysis. In this sense, this research is relevant because it contributes to the efforts to popularize this approach, which is limited to the studies mentioned above. Furthermore, given the importance of the event analyzed here for the use of social media as a means of activism by conservative groups in Brazil, its comparison with other important studies in the field, such as Mercuri and Lima-Lopes, may be relevant for understanding the roots of digital populism in Latin America (Mercuri and Lima-Lopes 2020).

The approach outlined in this article contributes to understanding the semantics of hate speech on social media. In essence, the approach visually represents the semantic relationships between, within, and amongst the many clusters. This facilitates a broader readership's interpretation of the results, as traditional collocation tables are often challenging to comprehend. The approach makes some contributions to this interpretation, including the establishment of semantic relationships between lexical items within and between clusters, as well as the contribution of each cluster to the construction of the discourse. By treating each lexical element as a node within a network representation, connections and the quantitative importance of each item can be more effectively visualized, thereby enabling a clearer observation of the relationships between intensifiers in a cluster or between the various clusters. In other words, a visual representation of the statistical relationships allows the reader to intuitively perceive the results without compromising the statistical reliability of the data.

The results show that the comments analyzed on the *ExpoQueer* exhibition reveal a solid resistance to dialogue and the acceptance of ideas. The discourse of the comments is based on the reiteration of conservative and religious values without any openness to debate. The lexical networks identified semantic clusters around themes such as religion, family, and art criticism. Choices such as “cristão [Christian],” “lei [law],” “criança [child],” and “imagem [image]” were central to the attacks. The comments demonstrated religious intolerance and associated the exhibition with moral degradation, pornography, and paedophilia. The exhibition was seen as a threat to Christian values and the traditional family, with direct attacks on the sponsor and the artists. Network analysis showed that these comments formed coherent clusters, reflecting polarization and a lack of openness to alternative positions. In short, the findings are significant, as they suggest that religious conservatism was the main driving force behind the hate speech, which aimed to delegitimize the exhibition and its sponsors based on conservative religious and social values.

## 2 Methods

The corpus of this research is a swarm of social media comments on August 9, 2017. The focus of this social media movement was a post announcing the *ExpoQueer* exhibition posted on the Facebook page of a private museum and sponsored by a financial institution located in the city of Porto Alegre (RS).

The quantity and speed with which the comments inundated the museum's Facebook page were unparalleled at that time. The negative repercussions prompted interventions by conservative political figures and sparked street demonstrations in Porto Alegre (Phillips 2017). This context led to the removal of the exhibition announcement from the bank's official Facebook page within a few days, and its subsequent cancellation under pressure from these groups. As previously mentioned, this event marked the beginning of a practice of virtual lynching (Mercuri 2018) of companies and public figures, a tactic commonly employed by conservative political activists with a strong moral panic tone (Balieiro 2018).

The data under analysis in this article are the comments that formed such a swarm. This data was directly extracted from the original publication before it was taken offline, ensuring the integrity of the texts. The study refrained from using reposts from third-party sites or profiles to prevent any alteration of the texts. The data was extracted using Netvizz (Rieder 2013), a tool installed by the user on their Facebook profile, which allowed them to extract metrics on groups, posts, and public profiles. The data provided by the tool included overall post statistics, comments (UFT-8 standard), number of reactions, calculation of engagement, and network of interactions amongst the post and Facebook users. It is worth noting that, after December 2018, Facebook restricted free access to such data due to the so-called Cambridge Analytica Scandal (Schneble, Elger, and Shaw 2018), rendering tools like Netvizz obsolete.

The data was anonymized to avoid user identification, in line with the ethical parameters Beninger suggested for social media research. Commenters' handles were automatically removed from the comments, as were any other profiles quoted or replicated. References to cities and states other than where the exhibition occurred were also deleted (Beninger 2017). The users were labelled using sequential numbers during the creation of graphs, further ensuring the anonymity of the users.

As shown in **Table 1**, the data collected consist of a total of 9,396 comments, of which 2,372 are replies and 7,024 are original comments, with a total of 161,486 tokens and 12,846 types.

Total comments	9,396
Original comments	7,024
Replies to comments	2,372
Types	161,486
Forms	12,846

**Table 1:** Corpus design.

Following data collection, network visualization was generated in Gephi (Bastian, Heymann, and Jacomy 2009), a software that creates interaction graphs. The centrality measure was applied to the data (Freeman 1978), and the 150 more central words were chosen for the analysis.

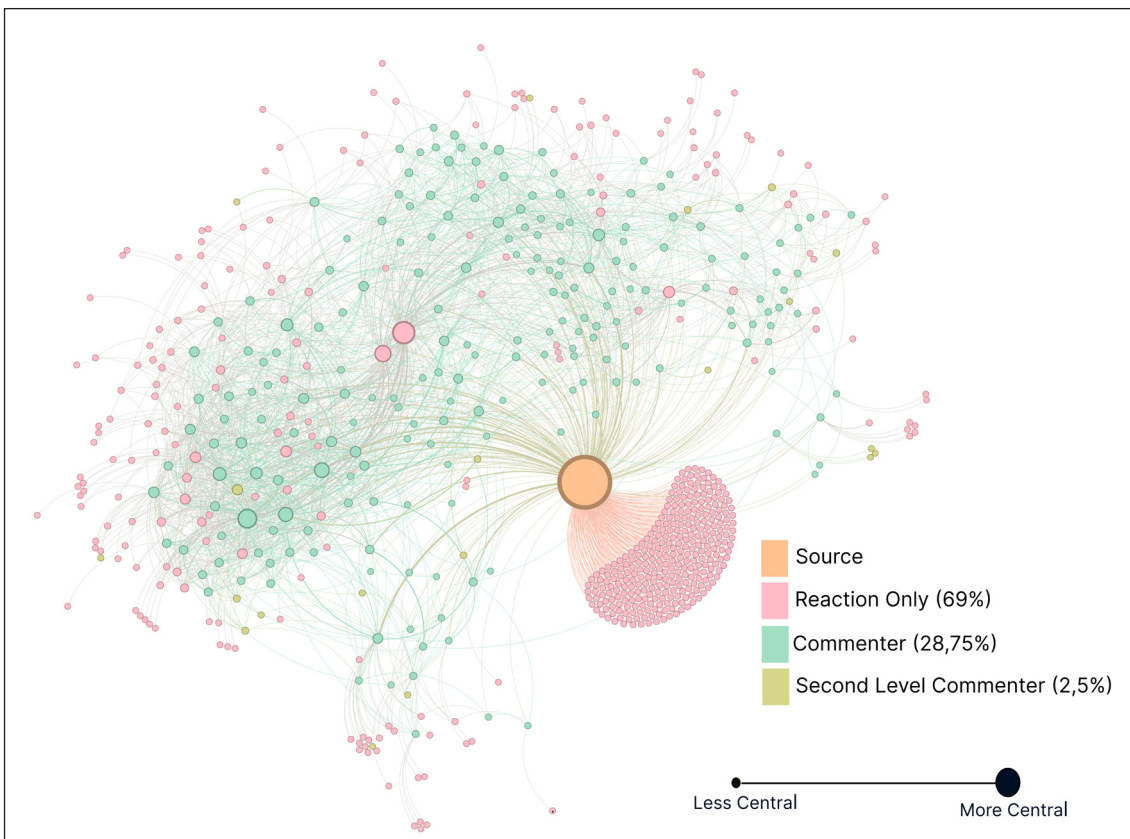
The processing sequence of comments started with the use of Sketch Engine (Kilgarriff et al. 2014) for textual lemmatization. Then Cowo (Levallois [2012] 2023) generated a matrix based on the words of a corpus. This matrix draws on the calculation of collocates, considering their relationship (mutual interaction), which depends on co-collocates. These data were then processed in VOSviewer (VOSviewer 2025) to generate a graph of correlations between the words. After that, the data were run through Gephi to finally generate a network graph. Two calculations were then applied to the data, centrality and clustering coefficient, aiming to visualize strongly co-occurring words, and a minimum frequency of 10 was taken as baseline, resulting in 150 words. The processing of concordances was done in order to analyze lexical patterns. A concise step-by-step of the processes would be:

- Data Collection
  - Use Netvizz to collect comments and interactions
- Anonymization
  - Remove identification of users and locations
- Graphs and lemmatization
  - Lemmatize using Sketch Engine
  - Create matrix-based collocations using Cowo
  - Create correlation matrixes using VOSviewer
- Network visualization
  - Create user interaction graphs using Gephi
  - Application of the centrality measure
- Cluster Analysis
  - Select the minimum 10 baseline occurrence or 150 more frequent words

- Create semantic clusters using Gephi
- Concordance analysis
  - Concordance for lexical patterns

### 3. The Study

Altogether (see **Table 1**), over 9,000 comments were made within 24 hours, revealing an immediate reaction to the post. **Figure 1** provides some information regarding the comment network in *ExpoQueer*: (1) a visual arrangement of the network; (2) nodes classified by type of action; (3) nodes according to their centrality; and (4) the relationship amongst comments.



**Figure 1:** Network of comments and roles in *ExpoQueer*.

In **Figure 1**, the Source represented in orange is the central node, the point of origin of the post, and where comments and reactions are directed to, indicating that most interactions connect directly to this point. Users who only reacted to the post (Reaction Only) are in salmon and reflect users who only interacted with reactions (likes, etc.) without commenting. They make up 69% of the total interactions on the network.

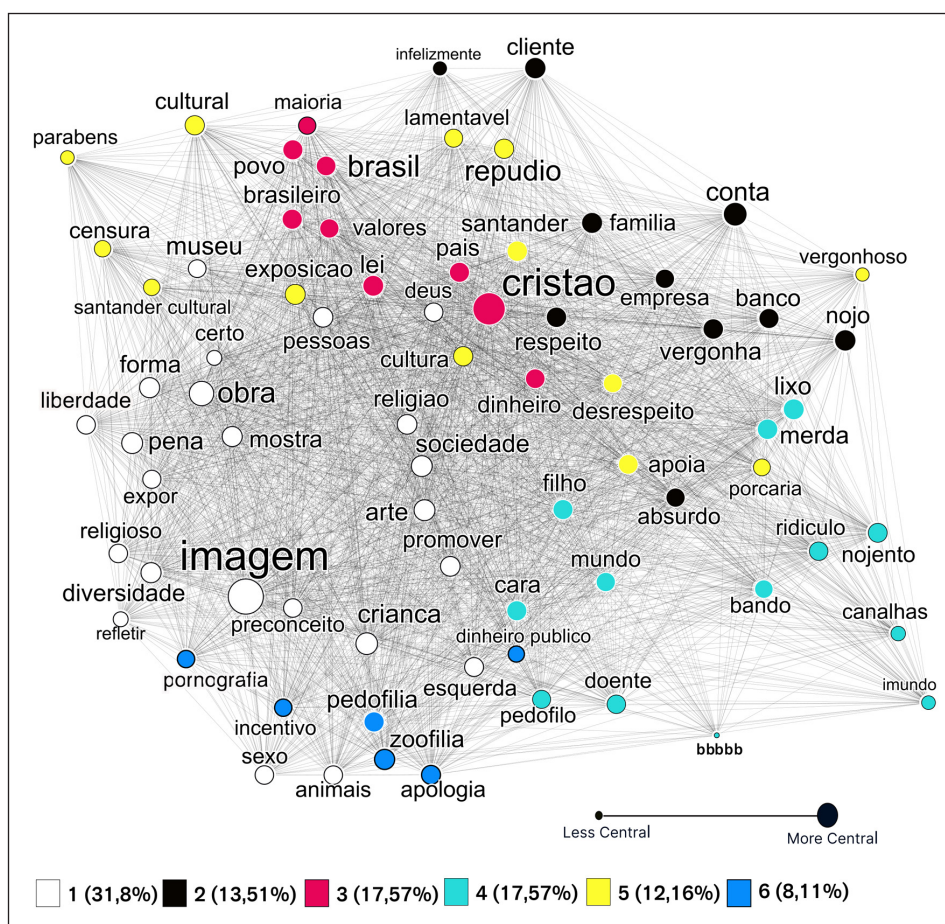
Most of these nodes have low centrality and cluster around the source node and do not interact directly. There are a few exceptions in the centre of the graph, which shows two Reaction Only users with an above-average centrality metric. Although they are related to several other commenters and Reaction Only users, their absence would not disassemble the interaction network. Commenters, represented in green, are the users who posted comments against the original publication, representing 28.75% of all interactions. These nodes have a greater distribution and seem to connect to each other, creating a denser network of interactions, suggesting greater engagement. Finally, Second Level Commenters, represented in yellow, indicate users who have responded to other users' comments, representing only 2.5% of the total. Their role is to bring "depth" to the discussion, as they promote the exchange of ideas or the escalation of the debate.

Like any network graph, the position of the node and its size indicate the centrality of each node in the network. The Source node (orange) is highly central, connecting many interactions. On the other hand, the Reaction Only nodes (salmon) are less central, interacting almost exclusively with the original post, while the Commenters (green) are more distributed and form a more complex network of interactions. The cluster of green nodes (Commenters) suggests a dense network of direct interactions between users, indicating that commenters discuss with each other, not just with the main post. This dense network may suggest where the most prolonged and polarized debate occurred. The network has a polarized structure, with a cluster of commenters forming a significant network around the central post and a significant cluster of isolated reactions. This reflects the dynamics of online participation, where many users interact superficially (just reacting) while a minority engage in in-depth discussions.

In other words, the figure reveals that the majority of interactions are passive reactions to the post (69%), while a smaller percentage of users (28.75%) actively participate by commenting, and an even smaller fraction (2.5%) engage in deeper discussions by commenting on other users' replies. This suggests a dynamic of online involvement in which few users are actually active in the debate.

**Figure 2** is a semantic network graph representing the co-occurrence of words within the corpus of comments. Something important to note is that, at this point, the objective is to understand the general relationship amongst the clusters and the semantic field the network represents. A more detailed analysis of each cluster will be performed later. Each node in the graph represents a lexical item, and the connections (edges) between the nodes indicate that they occur together. The network is quite dense, with many connections between the different nodes (lexical items). Therefore, there is a semantic interdependence between the terms used in the comments, reflecting

that many keywords might co-occur around similar themes and indicating that the discourse was convergent regarding main topics. Participants are focused on central themes, which are relatively limited in number, repeated and reinforced throughout the swarm.



**Figure 2:** Words and their clusters in *ExpoQueer*. (The translation of each word is available in the analysis of each cluster [Figures 3 through 8].)

Central nodes such as “imagem [image],” “cristão [Christian],” and “cliente [client]” are important nodes of convergence, meaning that these terms function as hubs that connect many other terms. These terms have a high degree of centrality, meaning that they are semantically relevant and work as anchors around which the discourse is built. The node “imagem [image],” for example, works as a hub that connects both words related to the theme of art (“obra [piece],” “museu [museum],” “exposição [exhibition]”) and moral criticism (“pornografia [pornography],” “pedofilia [paedophilia],” “lixo [rubbish]”).

The different clusters are grouped according to their co-occurrence. For example, the white cluster (31.8%) seems to contain words associated with cultural criticism and the exhibition itself (“imagem [image],” “obra [piece],” “museu [museum],” “religioso [religious]”), while the black cluster (13.51%) contains words related to moral and social disapproval (“cliente [client],” “reputação [repudiation],” “vergonha [shame]”). The yellow cluster (12.16%) seems to be more related to issues of nationality and cultural values (“desrespeito [disrespect],” “porcaria [crap]”), which suggests that part of the discourse bases its arguments about traditional values. Here, the discourse centres on how Brazilian and Christian values are supposedly being attacked.

The presence of terms such as “pornografia [pornography],” “pedofilia [paedophilia],” and “zoofilia [zoophilia]” (light blue cluster) reveals that a significant proportion of the comments associated the exhibition with themes of a sexual nature in a pejorative way. Such terms are connected in a sub-group that suggests users are criticizing the use of public funds to support an exhibition that, in their view, promotes immoral or illegal behaviour. The presence of terms such as “esquerda [left]” and “comunismo [communism]” (next to “money” and “values”) may indicate an attempt to politicize the issue and associate the exhibition with political ideologies perceived as moral adversaries. This may suggest that the polarized discourse against the exhibition is rooted in moral judgements about sexualized content, and this cluster represents a sub-group within the debate that is particularly motivated by these issues.

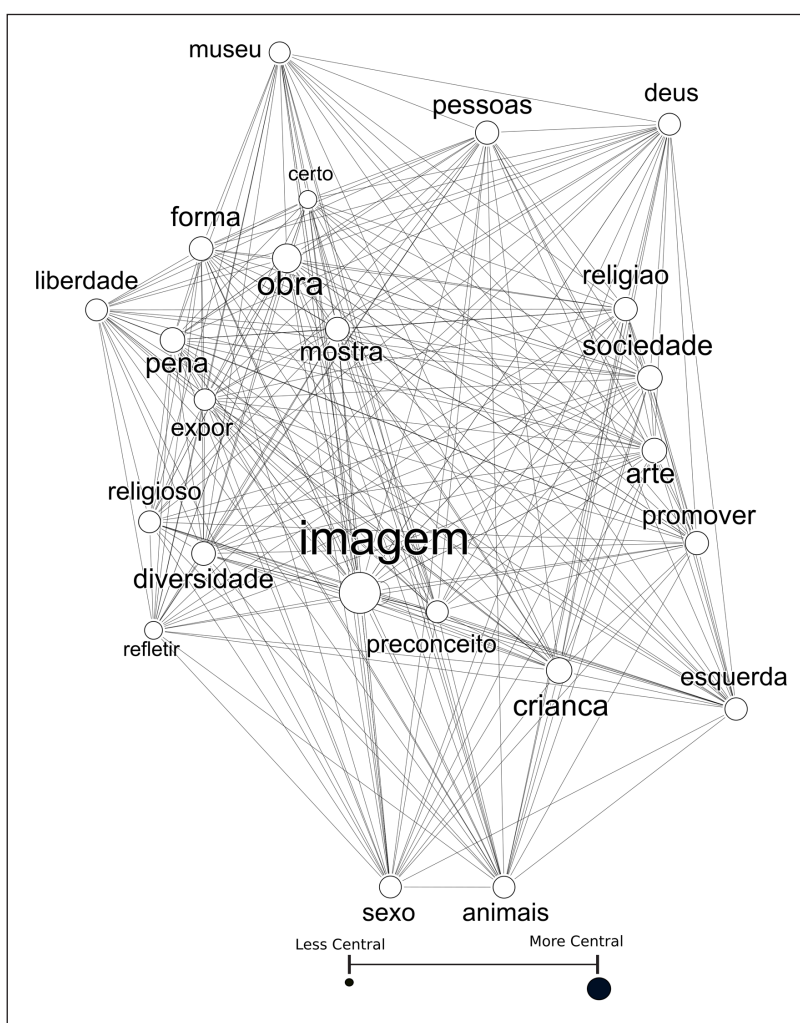
Clusters 1, 3, and 4 have the highest number of words. This does not seem to be a surprise, as the kind of criticism directed at the exhibition, as we will see below, seems to be closely related to a conservative religious movement. As shown (**Figure 2**), clusters 1 and 3 are close. Cluster 1 is also related to 4, 5, and 6, but is quite far from 2, which is situated at the other end of the graph and relates more frequently to 4 and 5. Several words of 1 appear in the central part of the graph, such as “religião [religion],” “arte [art],” “sociedade [society],” and “promover [promote].” That topology makes them work as a link between the meanings instantiated by cluster 1 and the others. The margins of the graph are taken mainly by words from clusters 6, 5, and 1, suggesting interconnectivity.

The central words connect to some clusters at the same time. For example, “imagem [image]” and “cristão [Christian]” connect the black-and-white clusters, working as a point of intersection for different themes. Denser clusters, such as the white one, show that words within this group frequently co-occur, creating a well-defined core around which other themes gravitate. The high interconnectivity suggests that, although the debate has different themes, most are not isolated; there is a continuous flow of ideas between the clusters. Despite that, the light blue cluster (17.57%) is more peripheral



and less connected to the other clusters. In conclusion, the network's topology shows a highly dense structure around strongly connected moral critiques, with some more isolated sub-groups dealing with specific topics such as pornography and paedophilia, while others deal with more general issues of cultural and religious values.

**Figure 3** shows the words that most commonly occur in cluster 1. One observes that the words have an intense relationship of connection. The centrality of the word “imagem [image]” seems to make it an important hub that helps to weave the lexical relationship.



**Figure 3:** Cluster 1 in *ExpoQueer*. (Translations: “museu [museum],” “pessoas [people],” “deus [God],” “liberdade [freedom],” “forma [form],” “certo [right],” “obra [work],” “pena [pity],” “mostra [exhibition],” “religião [religion],” “sociedade [society],” “expor [exhibit],” “religioso [religious],” “arte [art],” “diversidade [diversity],” “imagem [image],” “promover [promote],” “refletir [reflect],” “preconceito [prejudice],” “criança [child],” “esquerda [left],” “sexo [sex],” “animais [animals].”)

“Imagem [image]” concerns an appraisal process related to various meanings. The first is the degradation of the image of the bank itself (example 1), a result from funding the exhibition. “Imagem [image]” collocates with words like “imundice [filth]” and “lixo [garbage],” in a clear negative meaning. In example 2, one observes the association of the images displayed at exhibition with paedophilia (present in another cluster) and crime. The association with religious dogmas is also common, as a way of negatively appraising the exhibition and the bank (example 3). “Imagem” also connects different words from different clusters: as this is a fine arts exhibition, the concept of image ends up being central. In example 1 we have the name of the sponsoring bank, belonging to cluster 5; “vergonha [shame]” present in 2; and “imundice [filth]” (lemmatized as “imundo [scum]”) present in cluster 4. In 2, for example, it is related to “clientes [customers],” belonging to 2, while “lixo [garbage],” present in 1 and 2, is also in cluster 4.

1. “**Santander**, eu teria vergonha de ter minha **imagem** associada a essa **imundice!** **Lixo!** [**Santander**, I’d be ashamed to have my **image** associated with this **filth!** **Garbage!**]”
2. “para com os que são seus clientes, com **imagens criminosas** relacionadas inclusive a crianças [to those who are your customers, with **criminal images** related to children]”
3. “obscenas grifadas e fazendo escárnio da **imagem de Cristo**. Banco lixo!! [obscenities underlined and scorning the **image** of **Christ**. Garbage bank!!]”

“Criança [child]” also emerges as an important word in this cluster, as it is related to the classification of the pieces of art as pornographic or as encouraging paedophilia. This judgement is expressed by the erotization of children (example 4), or by a relationship established between the pieces and child abuse (example 5). Child abuse did not occur in the exhibition, which may lead to the conclusion that such comments are mimicked from previous comments of from other media without the proper verification. Some comments were posted based on false information about exhibition (example 6), describing it as “lixo [garbage]” and “imundos [scum].” It is noteworthy that the examples studied so far contain no effective discussion about the pieces exhibited, and the appraisal choices are quite emotional.

4. “**sexualizar e erotizar** crianças, quadros que só transmitem **sexo explícito** [**sexualizing** and **eroticizing** children, paintings that only show **explicit sex**]”
5. “**abusar** da inocencia de crianças é uma das coisas mais **asquerosas** que já ví [**abusing** the innocence of children is one of the most **disgusting** things I’ve ever seen]”

6. “**Lixo** estão mostrando pra crianças até sexo oral dizendo ser arte seus **imundos** [**Garbage** you are even showing children oral sex saying it is art you **scum**]”

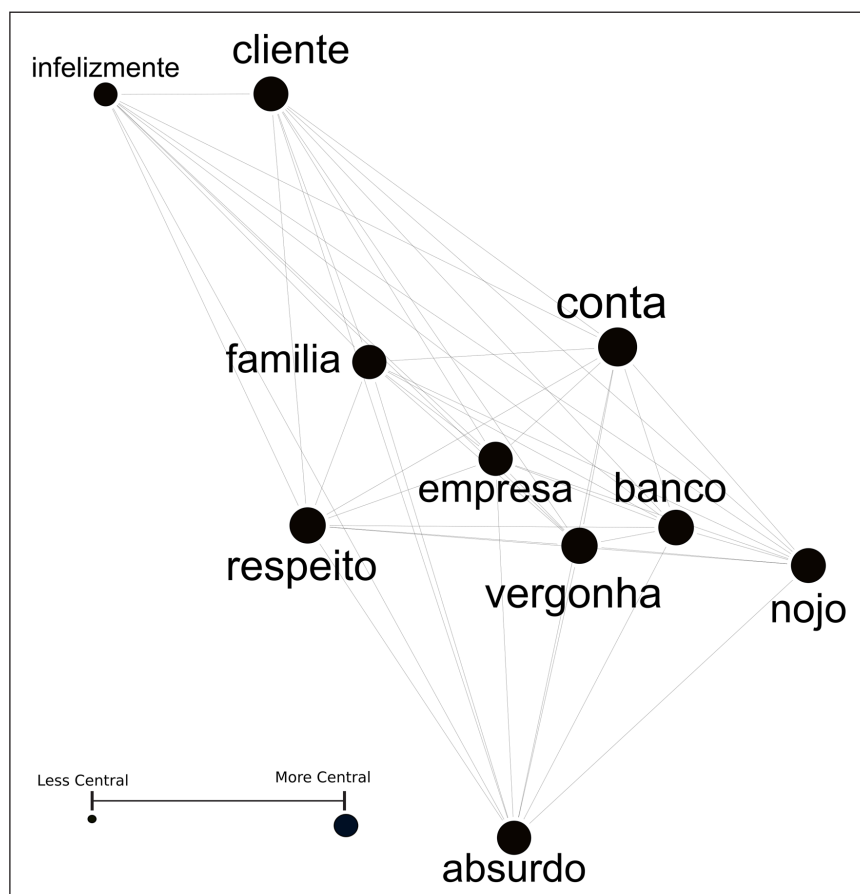
Words such as “Deus [God],” “religião [religion],” “sociedade [society],” “liberdade [freedom]” and “religioso [religious]” seem to be related to a semantic field that defines the social spectrum in which exhibition criticism is. Most of the time, these words are related in a way that conveys the idea of a Christian and majority society that is offended and, therefore, needs to be protected. In example 7, example 8, and example 13, the notion of “desrespeitar [disrespect]” conveys the negative meanings, assigning the exhibition the responsibility for offending “Deus [God]” and “crianças [children].” This obviously signals a negative attitude, describing those involved in the exhibition as “o que há de pior [the worst there is].” There is a clear polarization in this attitude that establishes the need for confrontation between *us* (Christians and decent people), versus *them* (criminals [example 10], slime and vipers [example 11], or libertines [example 9]).

7. “**desrespeitando** a inocência das crianças e a Deus principalmente [**disrespecting** the innocence of children and God particularly]”
8. “**pisam** na fé cristã, seus símbolos e o nosso Deus, Jesus Cristo, vocês **são o que há de pior** [**trample** on the Christian faith, its symbols and our God, Jesus Christ, you **are the worst there is**]”
9. “estão perdendo o bom senso é **inadmissível** que liberdade de expressão se torne **libertinagem** [you are losing your sense it is **unacceptable** for freedom of speech to become **libertinism**]”
10. “que incentiva a pedofilia, zoofilia e crítica à liberdade religiosa não é arte, é **crime!** [that encourages paedophilia, zoophilia and criticism of religious freedom is not art, it’s **criminal!**]”
11. “Sociedade democrática escarnecendo da religião? **Víboras** Uma vergonha! Esgoto da sociedade. [Democratic society scorning religion? **Vipers** Shame on you! Slime of society.]”
12. “graças a **Deus** nunca fui cliente dessa **merda** de banco [thank **God** I’ve never been a customer of this **shit** of a bank]”
13. “**invertendo** valores e destruindo a família. Deus me livre!!! [**reversing** values and destroying the family. God forbid it !!!]”

The word “Deus [God]” can be used in an expression (example 12 and example 13) to positively express the fact of not being a client of the sponsoring bank. This reflects

a negative attitude towards the bank: the absence of a business relationship with the bank is God's "gift." Example 12 also contributes an insult-based appraisal of the bank. Such a strategy seems to be common in the corpus, apparently connecting different clusters.

By comparing clusters 1 (Figure 3) and 2 (Figure 4), one observes that the latter has a smaller number of words, with much less intense interaction. At first, this has an impact on the way they are combined: "absurdo [absurd]" and "conta [account]," for example, seem to be connected only through "vergonha [shame]" or through a longer path, via "empresa [company]." Another noteworthy aspect is that the centrality of all words is quite similar, showing that they are of equal importance. One notes that this cluster contains words that are focused on the appraisal processes of the "banco [bank]" and of its "clientes [customers]."



**Figure 4:** Cluster 2 in *ExpoQueer*. (Translations: "infelizmente [unfortunately]," "cliente [customer]," "familia [family]," "conta [account]," "empresa [company]," "respeito [respect]," "banco [bank]," "vergonha [shame]," "nojo [disgust]," "absurdo [absurd].")

In examples 14, 15, and 16, “client [customer]” and “conta [account]” are used to threaten the bank with the loss of customers who are unhappy with the exhibition. This threat is necessarily instantiated either by a negative appraisal of the bank (in the case of example 14, using the word “lixo [garbage],” which belongs to cluster 4), or by resorting to religion, portraying the bank and, of course, *ExpoQueer* as being against either religion or religiosity. This argument is also present in example 23, which connects the notions of family and religiosity in opposition to the sponsor.

14. “Parabéns por perder vários **clientes** Santander Lixoo! [Congratulations on losing several **customers** Santander Traash!]”
15. “Espero que percam todos os **clientes** católicos e todos os demais de profissão de fé [I hope you lose all your Catholic **customers** and all others who are religious]”
16. “Não tenho **conta** nesse banco mais [I no longer have an **account** with this bank]”
17. “Tomam **vergonha** nessa cara [**Shame on you**]”
18. “Vocês deviam ter **vergonha** de sediar uma exposição **imunda** como essa. [You should be **ashamed** of hosting such a **filthy** exhibition.]”

“Vergonha [shame]” expresses a negative appraisal of the bank and its exhibition (examples 17 and 18), with offensive expressions—such as “shame on you” and “filthy”—used to show discontent through a cursing tone. It is noteworthy that none of these criticisms offers any discussion that is not offensive to the bank and the exhibitors, while the reason for such tone is neither clear nor explained. The same type of strategy is used in examples 20 and 21, in which offensive words such as “absurdo [absurd],” “ridículo [ridiculous],” and “nojo [disgust]” are directed at the bank with no discussion or reflection of which elements of the exhibition triggered them. There is merely aggression by citing a set of values deemed as universal but situated within a specific extremist Christian religious context.

Once again, the commenter portrays a world in which the bank and the exhibition are necessarily his/her enemies. In example 23, the bank is accused of forcibly establishing “comunismo [communism],” being atheist and immoral. At first, this kind of accusation sounds confusing since the sponsor—a capitalist company that seeks private profit—would have no interest in establishing a regime that would involve its own extinction. Example 24 introduces the idea that the exhibition opposes family values or individuals who have them, leading to the recommendation that people should keep their distance to avoid being corrupted.

19. “Me dá **nojo** ver essas ditas **artes modernas** [These so-called modern **arts disgust** me]”
20. “Nojo do **Santander!** [**Santander** disgusts me!]”
21. “Um **absurdo** essa exposição ridícula!!! [This ridiculous exhibition is **absurd!!!**]”
22. “**Absurdo** isso que o Santander está fazendo [What Santander is doing is **absurd**]”
23. “O objetivo é destruir a família, a moral, o cristianismo e implantar o comunismo [The goal is to destroy family, morality, Christianity and implant communism]”
24. “Aconselho a pessoas de família a não irem nessa porcaria [I advise family people not to visit this **crap**]”

Figure 5 shows the words of cluster 3. The relationship between the words seems to reinforce the appraisal processes of the bank, the exhibition and—unlike previous clusters—the actual exhibition venue (Santander Cultural).

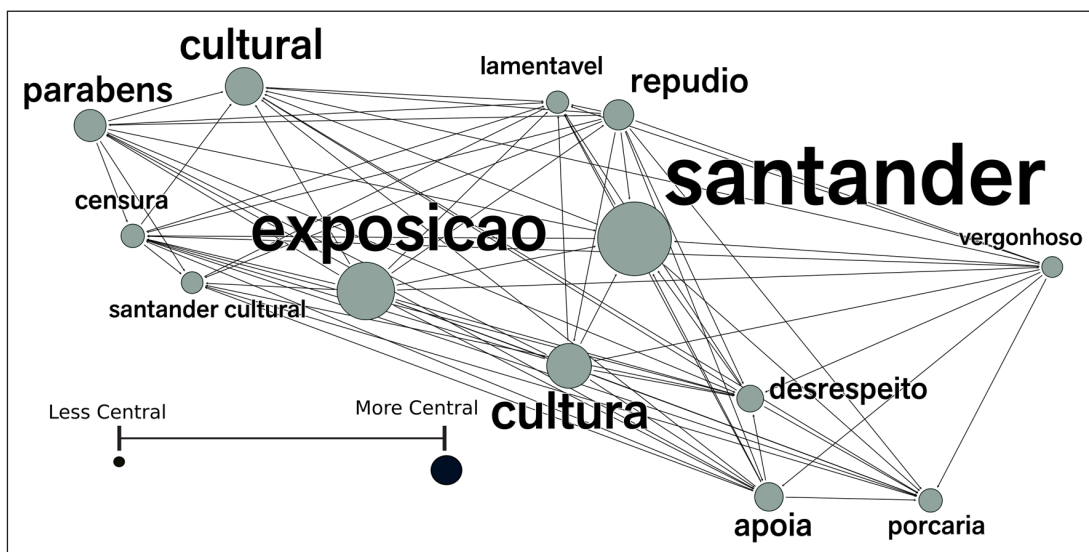


Figure 5: Cluster 3 in *ExpoQueer*. (Translations: “parabens [congratulations],” “cultural [cultural],” “lamentavel [deplorable],” “repúdio [repudiation],” “censura [censorship],” “exposição [exhibition],” “santander cultural [Santander cultural],” “santander [Santander],” “vergonhoso [shameful],” “cultura [culture],” “desrespeito [disrespect],” “apoia [support],” “porcaria [crap].”)

As shown in the examples below, the sponsoring bank’s name is invariably linked to the negative appraisal choice and, once again, in very aggressive wordings. In example 25, this happens by directly cursing the bank and its staff, in a clear attitude of anger;

in example 26, the bank is represented as holding values that are not compatible with Christian framework of thought through epithets associated with the bank and its cultural venue (example 27).

25. “é do meu dinheiro que esses **filhos da puta** do Santander tão usando pra financiar isso [it’s my money these Santander **motherfuckers** are using to fund this.]”
26. “Santander está representando a **podridão** que uma **Alma** [Santander is representing the **rot** that a **Soul**]”
27. “Santander Brasil, Santander Cultural, bando de **degenerados doentes!** [Santander Brasil, Santander Cultural, bunch of **sick degenerates!**]”

The kind of aggressive attitude resulting in straightforward cursing associated with nouns is also common in relation to the exhibition, described as “nojeira [disgusting]” and “pedófila [paedophilic]” (examples 29 and 30); in addition, such appraisal framework associates the bank and its cultural centre to sexually inappropriate attitudes (examples 30 and 32). “Parabéns [Congratulations]” is used ironically, one of the few examples of sarcastic appraisal that does not use aggressive language (examples 28).

28. “**Nojo** desse movimento. Parabéns pela exposição! [**Disgusted** by this movement. Congratulations on the exhibition!]”
29. “**Nojeira** essa **merda** de exposição!!! [This **shitty** exhibition is **disgusting!!!**]”
30. “**Pedofilia, zoofilia e putaria** que estão na exposição???? [Paedophilia, zoophilia and **depravity** that are in the exhibition????]”
31. “Mil vezes, canalhas!!! É a Cultura de **satanás** [A thousand times bastards!!! It is the Culture of **Satan.**]”
32. “Não à cultura **podre**. Imagina incentivar zoofilia [No to **rotten** culture. Imagine encouraging zoophilia]”

“Cultural [cultural]” occurs dissociated from the name of the museum in question and associated with elements of appraisal such as “lixo [garbage]” and “marxismo [Marxism].” The former is evaluative (example 33) and relates to words from different clusters, repeating a constant pattern of aggressive judgment. “Marxismo [Marxism]” (example 34) seems to be related to a view of the company as responsible for funding a scheme of financial expropriation, a contradiction already noted in the analysis of example 23. The use of “subersivo [subversive],” also in examples 34, evokes the symbolic construction related to the 1964 military coup in Brazil, known for using this

word to describe any individual or group not aligned with it. The use of this word, even if unconsciously, can be an indication of the user's ideological affiliation.

Examples 35 and 36 bring two co-occurring nouns, in this case “repúdio [repudiation]” and “desrespeito [disrespect].” They are invariably linked to the identification of the exhibition as a filthy event whose very existence necessarily offends the Christian faith.

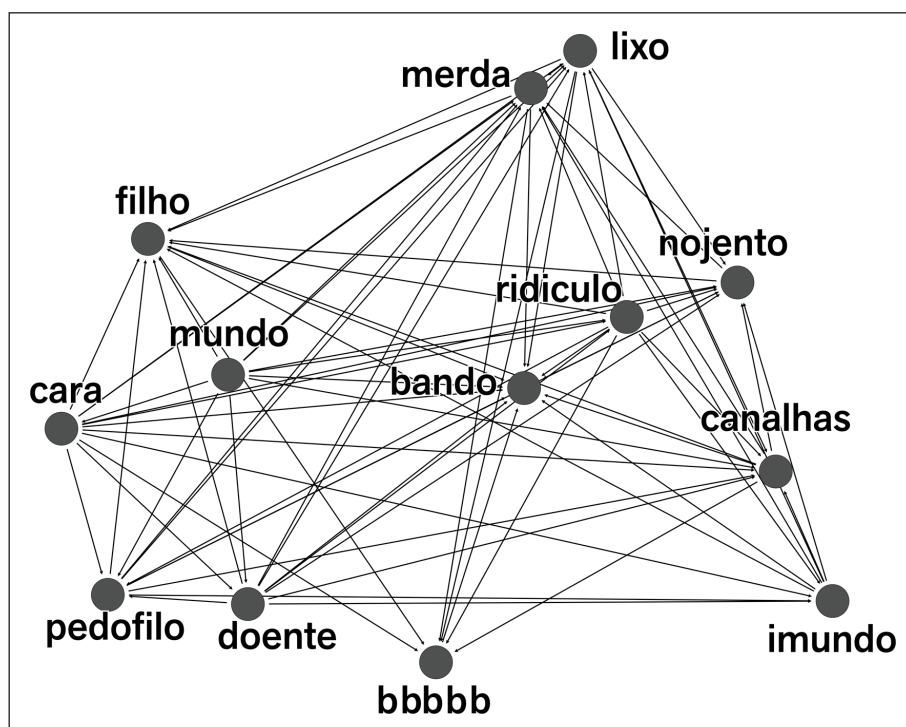
33. “Se patrocina esse **lixo** cultural, não nos merece como clientes!!! [If you sponsor this cultural **garbage**, you don't deserve us as customers!!!]”
34. “O prazer do marxismo cultural e da **subversão** [The pleasure of cultural Marxism and **subversion**]”
35. “Meu **repúdio** à essa exposição **pútrida** [My **repudiation** of this **putrid** exhibition]”
36. “Gostaria de expor meu **repúdio** ao **desrespeito** contra a fé cristã [I'd like to express my **repudiation** of the **disrespect** for the Christian faith]”
37. “Essas **porcarias** virem das cabeças dos **esquerdistas** até dou um desconto, porque são **débeis mentais**, mas o banco patrocinando isso. [Such **crap** coming from the mind of **lefties** I can understand, because they are **morons**, but the bank sponsoring it.]”
38. “Banco de merda!!! **Porcaria**, **lixo**, tomara que quebre financeiramente! [Shitty bank!!! **Crap**, **garbage**, I hope it breaks!]”
39. “Chamar essa **porcaria** de arte?! [You call this **crap** art?!]”

The use of “porcaria [crap]” also relates to an appraisal process that refers to both the bank and the actual exhibition. In example 37, it is used to make a comparison between left-wing activists—here described as “esquerdistas [lefties]” and “retardados [retarded]”—and the bank. In example 38, aggression is turned against the bank, appraised as “merda/porcaria [shit/crap]” and then deserving to go through bankruptcy due to this exhibition sponsorship. The only aesthetic judgment is in example 39, but it is no less verbally aggressive.

**Figure 6** shows cluster 4. Once again, one notes words aimed mainly at judging the bank and the exhibition. Unlike other clusters we have studied, it consists of terms of a more openly aggressive nature. Words like “canalhas [bastards],” “imundos [scum],” “merda [shit],” “doente [sick],” and “bando [bunch]” represent the negative nature of their choices. Like cluster 2 (see **Figure 4**), the words here do not vary in centrality.



40. “Banco **filho da puta!!!** Nojeira essa **merda** de exposição!!! [Motherfucker bank!!! This **shitty** exhibition is **disgusting!!!**]”
41. “O responsável por esta **merda** de exposição é um **canalha covarde de marca maior** [The person responsible for this **shitty** exhibition is a **cowardly bastard of the worst kind**]”
42. “LIXO LIXO LIXO LIXO LIXO Absurdo!!! [Absurd **GARBAGE GARBAGE GARBAGE GARBAGE GARBAGE!!!**]”
43. “Vermes **imundos**, nojentos doentes. [Vermin **scum**, disgusting sickos.]”
44. “Cambada de **pedófilos**, ateus dos infernos. [Bunch of **pedophiles**, infernal atheists.]”
45. “Lixo **Ridículo!!** Não vou fazer parte dessa **imoralidade!** [Ridiculous Garbage!! I won’t be part of this **immorality!**]”
46. “Bisonho. Lixo Se **Bbbbbbb** fosse presidente essa banco estaria lascado [Ludicrous. **Garbage** If **Bbbbbbb** were president this bank would be done for]”



**Figure 6:** Cluster 4 in *ExpoQueer*. (Translations: “merda [shit],” “lixo [garbage],” “filho [child],” “cara [face],” “mundo [world],” “ridículo [ridiculous],” “nojento [disgusting],” “bando [bunch],” “canalhas [bastards],” “pedofilo [paedophile],” “doente [sick],” “imundo [scum],” “bbbbbb [bbbbbb].”)

Aggressiveness takes on different forms in the appraisal process. One of them qualifies the bank and the exhibition (example 40) through unmotivated cursing with a high level of aggressiveness. Another appraises negatively those responsible for the curatorship. Such professionals are directly portrayed and cursed as the exhibition (see example 41). Some cursing does not identify artists or curators, but an association to them is possible due to the context such comments were posted (examples 43 and 44). In example 44, there is a one-off expression of religious intolerance, associating atheism to paedophilia.

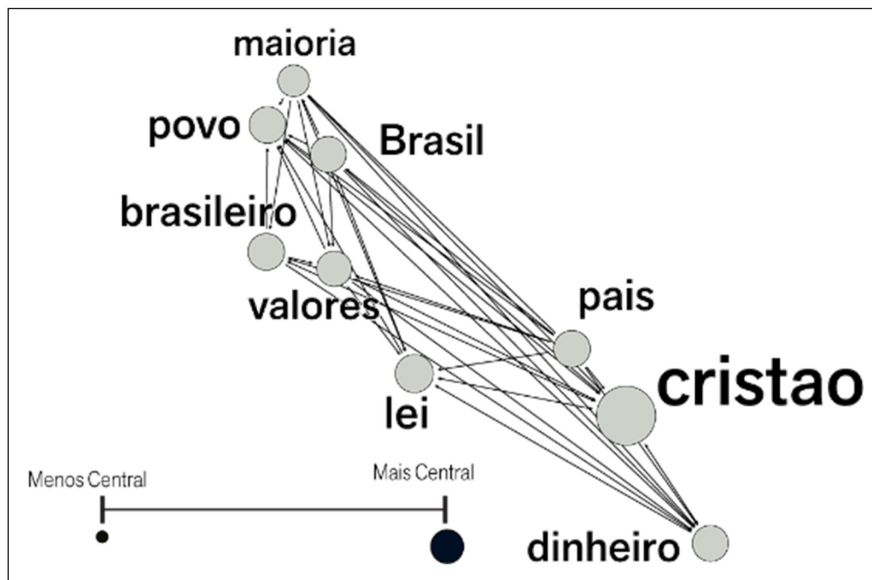
Intensification is a common strategy in this cluster. As seen in example 42, the same word is repeated over and over in capital letters. The former resource is responsible for building up an accumulation in semantic prosody, causing a cumulative and enhancing effect, while the latter, already common in the world of virtual relationships, means that the internet user is shouting. The repetition of the word “Bbbb” refers to the name of a presidential pre-candidate (the candidate’s name was anonymized according to the criteria established in the methodology section). This was the first and only time that a proper name appeared among the most frequently used words, which revealed a hope of institutionalizing the hatred shown in the posts (see example 46).

As seen in **Figure 7**, cluster 5 seems to be related to the characterization of the Brazilian people through Christian values. One notes that “**cristão** [Christian]” establishes a strong connection with “**país** [country],” “**leis** [laws],” “**valores** [values],” and “**dinheiro** [money],” as well as an indirect connection with “**brasileiro** [Brazilian]” and “**Brasil** [Brazil].”

47. “Faço minhas as palavras da **maioria** dos reclamantes [I echo the words of the **majority** of complainants]”
48. “deveriam ter vergonha de **ofender** aos **cristãos** e aos **valores familiares**. [you should be ashamed to **insult Christians** and **family values**.]”
49. “Ofensa aos **valores cristãos**, éticos e morais! [An insult to **Christian**, ethical and moral **values**!]”
50. “Assim **tamanha afronta** a fé da maior parte dos **brasileiros** [**Such an affront** to the faith of most **Brazilians**]”
51. “Acostumaram a **cagar** na cara dos brasileiros. [They’ve got used to **shitting** on the face of Brazilians.]”

The relationship between Christian and values is direct, setting up an opposition between the exhibition and faith, the former responsible for the destruction of virtues present in the latter (example 48), supposedly responsible for establishing ethics and

morals (example 49). There is a direct identification of Christian faith as the faith of the majority (example 50), which leads to the notion that the exhibition is a means of attacking such people and therefore deserves retaliation. In example 51, again, there is direct aggression against the bank and the exhibitors.

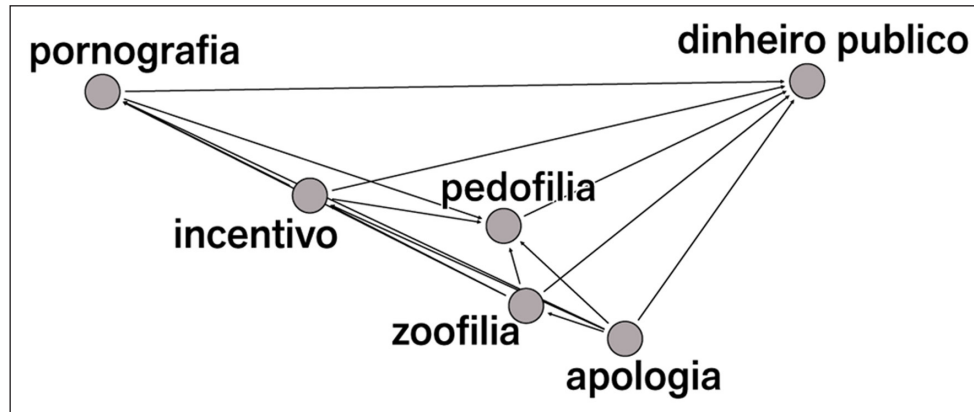


**Figure 7:** Cluster 5 in *ExpoQueer*. (Translations: “maioria [majority],” “povo [people],” “Brasil [Brazil],” “brasileiro [Brazilian],” “valores [values],” “país [country],” “lei [law],” “cristão [Christian],” “dinheiro [money].”)

The last cluster is shown in **Figure 8**. One observes that its words do not vary in centrality either, holding equal importance in the network they form. The set of co-occurrences seems to express something related to the themes being criticized by internet users.

52. “Seus lixos, estao fazendo **apologia a pedofilia**, e blasfemando contra Jesus (...) e a visão do mundo de vcs se resume a **incentivos a pedofilia, zoofilia**, etc façam isso em um país onde tais práticas são tidas como **naturais**, em um país muçulmano [You garbage, this is an **apology** for **pedophilia**, and a blaspheme against Jesus {...} and your worldview boils down to **encouragement of pedophilia, zoophilia**, etc. do that in a country where such practices are viewed as **natural**, in a Muslim country]”
53. “E onde qie expor **pedofilia, pornografia e genitália** é cultura?!? lixo de instituição [And since when displaying **pedophilia, pornography and genitals** is culture?!? garbage of an institution]”

54. “DINHEIRO DO MEU IMPOSTO, DINHEIRO PÚBLICO DEVOLVAM, DEVOLVAM!  
[MY TAX MONEY, PUBLIC MONEY PAY IT BACK, PAY IT BACK!]”



**Figure 8:** Cluster 6 in *ExpoQueer*. (Translations: “pornografia [pornography],” “dinheiro público [public money],” “incentivo [encouragement],” “pedofilia [paedophilia],” “zoofilia [zoophilia],” “apologia [apology].”)

As seen in example 52, the word “apology” is used in a negative sense, establishing a relationship in which the sponsor is responsible for religious aggression through the exhibition’s theme. In example 52, there is a reference to religious intolerance, perhaps motivated by prejudice and ignorance: example 52 associates the exhibition to cultural values of Muslim countries. In associating such countries with the natural adoption of practices that the internet user claims to see in the exhibition, it is implied that it is a means of spreading that faith.

Example 53 refers to an aesthetic judgment that dissociates the themes of *ExpoQueer* from the idea of culture, associating the bank with a negative and vexatious judgment. In example 54, the use of uppercase letters indicates shouting, a resource previously seen in example 42, in outbreak of anger. This example also contains important information, the use of “dinheiro público [public money]” to sponsor the exhibition, a reference to culture incentive laws. The use of the material process in the imperative mood, associated with the typography, serves as a sign of the comment’s aggressiveness.

#### 4. Discussion and conclusions

This article discussed hate speech on social media, focusing on Facebook comments against the announcement of the exhibition *Queermuseu – Cartografias da Diferença na Arte Brasileira* (Queermuseum – Cartographies of Difference in Brazilian Art). Employing appraisal system and network analysis, the study examined how religious

intolerance, propagated by conservative Christian groups, incited Facebook users to express negative reactions and hate speech towards *ExpoQueer*.

The results showed that most comments concentrate on supporting traditional religious and family values, with lexical choices such as “God,” “Christian,” “family,” and “child” playing a central role in the comments. These lexical choices were semantically clustered, associating *ExpoQueer* and the artists with the defacement of moral values, pornography, and paedophilia, thus supporting social degradation and degenerative ideologies and values. There are almost no critical arguments regarding the pieces of art at the exhibition; most comments directly attack the museum, curators, and artists. Furthermore, the comments represent a much larger number of people than those who visited *ExpoQueer*, which may lead to the conclusion that such users probably reproduced opinions without having had contact with the pieces of art.

The analysis of lexical networks showed a polarized conservative discourse, employing insults and moral judgments to discredit the exhibition, its supporters, and the artists involved. Commentators seldom delve into critical discussions about the exhibited works of art, instead choosing to echo opinions rooted in prejudice and repeating a standardized discourse. As the analysis progresses into the clusters, the lexicon becomes more specific in appraising the exhibition and the entities present. Also relevant is the fact that there are times when words do not seem to vary in terms of their centrality: the lexicon in a same cluster may show the same degree of importance both internally and in relation to the network.

The article contributes to exploring the dynamics of conservative discourse on digital platforms and to explaining intolerance and polarization in such an environment in Brazilian Portuguese. Results show social media shapes public interactions, facilitating the spread of hate speech and intolerance, often disguised as an expression of religious freedom. Analysis of the appraisal system, in turn, made it possible to identify the existence of certain strategies to appraise the exhibition, the artists, and their pieces, as well as their sponsor. Prominent among such strategies is the demonstration of anger and intolerance, with repetition of processes and epithets, and the use of insults and swearing as the most common forms of building an appraisal system. Within the representation systems present in the posts, the following can be highlighted:

1. **Religiosity:** A significant part of the comments seems to aim at demonizing *ExpoQueer*. In this sense, the exhibition is appraised as opposing Christian values and should therefore be closed. There is a clear association of the artworks with the principles of degenerate art.

2. **Family:** The exhibition is disruptive to the traditional family and threatens its existence. This is expressed alongside a religious framework taken as a founding element.
3. **Sponsor:** The bank is an institution that promotes cultural goods, and it is accused of attempting to degenerate family and religiosity. The clients threaten closing accounts as they categorize the bank as communist and “non-capitalist.”
4. **Art:** The works of art, their authors, and the curators are enemies to be fought against. They create a degenerative culture that ideologically imposes itself upon family and religion.
5. **Intolerance:** There is a demonstration of intolerance to the diversity of non-Christian thought and beliefs, with constant energetic displays of discontent, besides mentions of atheists and Muslims as individuals who accept any deviant behaviour. There is no attempt to establish a dialogue between opposing positions. As the data showed, most of the posts aim to directly attack those responsible for the exhibition and the exhibiting artists without creating space for reflection. Such results also have implications for the engagement system.

Although this approach is common in other areas, discourse studies in SFL in Portuguese have rarely resorted to approaches that integrate qualitative and quantitative research. If we take the study of discourse in social media, a relevant part of the studies in Portuguese are also based on prototypical examples, without analyzing their relevance within the context of interaction. So, this study also contributed to showing how discourse studies can benefit from integrating computational methods for analyzing large volumes of data, revealing discursive patterns that would not be easily observed through traditional methods of textual analysis. This article also demonstrates the possibility of using analysis tools such as those proposed by digital humanities to study discourse based on linguistic theories. It thus illustrates that analyses based on objective criteria can be integrated into the construction of appraisal and discourse analyses in the context of applied linguistics.

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## Competing interests

The author has no competing interests to declare.

## Contributions

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