

## **Análise de Perfil Latente: Uma Ferramenta Metodológica para a Estudo das Representações Sociais**

### *Latent Profile Analysis: A Methodological Tool for the Study of Social Representations*

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**RESUMO:** A análise de coletivos é um aspecto importante da teoria das representações sociais. Entretanto, apesar de sua importância, é possível observar dentro a teoria uma variedade de perspectivas sobre o que constitui um grupo social. Esse desafio se manifesta metodologicamente na seleção prévia de grupos pelo pesquisador, o que dificulta a confirmação de que os membros de um determinado coletivo compartilham uma representação e um campo simbólico comum. Este artigo visou apresentar uma possibilidade metodológica que utiliza a definição de grupos a posteriori, com base no critério de unidades de pensamento semelhantes: A Análise de Perfil Latente (APL). A APL é um tipo de análise fatorial que visa a identificar tipos de respostas e subgrupos em uma determinada amostra. Foi argumentado que os pressupostos metodológicos da LPA estão correlacionados com as bases teóricas das representações sociais, especialmente com a abordagem não consensual desenvolvida por Willem Doise. O artigo teve como objetivo demonstrar a convergência entre a APL e as três dimensões das representações sociais propostas por Doise: o campo comum, as variações na tomada de posição e a ancoragem das diferenciações individuais. Por fim, foi apresentada uma aplicação empírica dessa metodologia no campo das representações sociais, tomando como exemplo as representações sociais da história brasileira. A conclusão enfatiza a importância de novas metodologias destinadas a analisar os aspectos dissonantes das representações sociais, bem como o papel das inserções sociais na dinâmica representacional e na tomada de posição.

**Palavras-chave:** Análise de Perfil Latente; Representações Sociais; Grupos Sociais; Metodologia; Willem Doise.

**ABSTRACT:** The analysis of collectives is an important aspect of the theory of social representations. However, despite its importance, a variety of perspectives on what

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constitutes a social group can be observed within the theory. This challenge manifests itself methodologically in the prior selection of groups by the researcher, thus making it difficult to confirm that the members of a particular collective share a common representation and symbolic field. This article sought to present a methodological possibility which uses the definition of groups a posteriori, based on the criterion of similar units of thought: Latent Profile Analysis (LPA). LPA is a type of factor analysis that aims to identify types of responses and subgroups among a given sample. It was argued that the methodological assumptions of LPA are correlated with the theoretical bases of social representations, especially with the non-consensual approach developed by Willem Doise. The article aimed to demonstrate the convergence between LPA and the three dimensions of social representations proposed by Doise: the common field, the variations in position-taking and the anchoring of individual differentiations. Lastly, an empirical application of this methodology in the field of social representations was presented, taking as an example the social representations of Brazilian history. The conclusion emphasizes the importance of new methodologies aimed at analyzing the dissonant aspects of social representations, as well as the role of social insertions in representational dynamics and positioning-taking.

**Keywords:** Latent Profile Analysis; Social Representations; Social Groups; Methodology; Willem Doise.

### **Introduction**

Within the Theory of Social Representations, as in other areas of social sciences, intergroup relations are a central focus of discussion (Doise, 1984; Valentim, 2008; Wagner, 1995). Since his seminal work, Moscovici has emphasized the crucial role of social groups in the appropriation and dissemination of common-sense knowledge. However, despite its relevance, the definition of what constitutes a social group remains a heterogeneous topic among the theory. Harré (1984) proposed that groups can be understood from two main perspectives: distributive plurality and collective plurality. In a distributive plurality, members of a group have a common attribute with all the others (Taxonomic Groups). In this context, one can think of the macro-groups of belonging:

women, men, students, workers, etc. On the other hand, in a collective plurality, individuals are not necessarily assembled based on similar macro-social elements, since their organization is determined by the group itself (Structured Groups). According to Harré, the concept of social representations as discussed by Moscovici has limitations, particularly in viewing groups solely as aggregates of similar individuals, thus, as part of a distributive plurality. Harré extends this argument by revisiting Durkheim's concept of collective representations, suggesting that Durkheim viewed the social as a collective plurality, rather than a distributive plurality.

Potter and Litton (1985) also highlighted the complexity of conceptualizing groups within the field of social representations. Drawing on studies by Hewstone et al. (1982) and Di Giacomo (1980), the authors questioned the selection of groups (public school students in the former case and student committees in the latter). According to Potter and Litton, these studies revealed inconsistencies, including treating group definitions as natural, without considering that these categories might be socially constructed by the researcher and, thus, prone to issues. Potter and Litton argued that the challenge for the theory of social representations lies in the fact that the group being analyzed also serves as the framework for analysis, potentially leading to inconsistencies. Consequently, a mere inclusion in a collective does not ensure that an individual identifies with or behaves according to that specific group.

Moscovici (1985) addressed Litton and Potter's criticisms by arguing that the studies in question had undertaken extensive preliminary procedures before selecting the social categories. Additionally, Moscovici emphasized that the findings represented the subjects' perspectives, not those of the researchers, thereby defending social representations as a key component in the functioning of groups. With the theory's consolidation in the 2000s, this discussion remained a central focus in the field. In a

debate with Italian sociologist Federico Casalegno, Moscovici (2006) explored, from a theoretical standpoint, the challenges of defining what constitutes a community and highlighted how the evolution of "cyber-representations" could reshape the conceptualization of collectives.

Recently, Wagner and Raudsepp (2021) reexamined the role of intergroup dynamics within the theory of social representations in the form of the concept of Reflexive Groups (see Wagner, 1995). According to the authors, reflexive groups are characterized by having a specific social identity, marked by a representational system and a symbolic world of their own. These reflexive groups, "enable them to create, maintain and change their shared social reality, that is the representations, practices, and social objects" (Wagner and Raudsepp, 2021, p. 334). Thus, in this definition, groups can be understood as entities that embodies distinct social affiliations and belief systems related to a particular symbolic reality. Furthermore, this understanding can also be aligned with the definition of Structured groups (Harré, 1984).

Despite advancements in these discussions, the challenge of identifying the central elements for defining social groups (macrosocial similarities or specific social identities) remains a significant point of debate in the literature on social representations. Methodologically, this issue arises from the limitations of defining a social group a priori. When a researcher selects their own criteria for delineating a social group, it can obstruct the ability to verify whether individuals within this group share the same representation of a given object. Consequently, the conceptualization of a group often depends on the researcher's chosen criteria, which can involve a perceived common identity among individuals (Reflexive and Structured Groups) or their affiliation with broader social categories (Taxonomic Groups).

This article aims to present a possibility for defining groups in social representations. Thus, the intention is to demonstrate a methodological proposal based on the definition of groups a posteriori. This methodological proposal is embodied in the Latent Profile Analysis (LPA). LPA is a statistical analysis technique that involves the reduction of data, similar to a factorial analysis. This type of analysis allows the construction of typologies of profiles from a set of variables, thereby defining subgroups within a given sample (Ferguson et al., 2020). As a result, LPA enables individuals to be grouped according to the responses they provide. To explore the application of this methodology in the field of social representations, this article will adopt a specific structure: Initially, the methodological principles and utilization of LPA will be presented. Secondly, the connections between this methodology and the theory of social representations will be highlighted. Lastly, an empirical application of this methodology will be presented, based on a study concerning the social representations of Brazilian history.

### **Latent Profile Analysis**

Latent Profile Analysis has the purpose of understanding, among a variety of possible groupings, which would best represent a given population. These groups are generated based on the answers provided by the individuals. The groups or profiles identified are mutually excluding, since an individual can only be classified as belonging to one group. This type of procedure, called Mixture Modeling, discovers “hidden” groups from observable variables, that is, through a given set of data (Oberski, 2016). LPA relies on the premise of the “best fit”, i.e., groups are delimited using the average scores of each variable and according to class membership (Williams & Kibowski, 2016). Thus, the analysis enables clustering to be done a posteriori, avoiding the need for prior delimitation on the part of the researcher.

Two procedures are employed to define the latent profiles. The initial stage is the **Model Construction**, during which a range of potential groupings or clusters is generated. The researcher then evaluates these groupings to determine which ones best capture the underlying structure of the data. In this phase, the researcher can specify the number of clusters to be explored, allowing for a tailored analysis of the sample.

The second stage is **Model Evaluation** (Bolck et al., 2004), which determines the most suitable number of groups or clusters. This evaluation can be performed using various methods, but three statistical indicators are most employed: AIC (Akaike Information Criterion), BIC (Bayesian Information Criterion), and Entropy (Schmidt et al., 2021). AIC is a statistical measure that seeks to establish a connection between the robustness of the model and Parsimony (Ferguson et al., 2020). Robustness refers to the reliability of the model's statistical measures relative to the sample, while parsimony dictates that, among models of equal significance, the simpler model with fewer variables is preferred. Thus, when evaluating AIC, the model with the lowest value is preferred as it is the simplest. Similarly, the evaluation of the BIC indicators also favors numbers with lower values

Finally, the third indicator is Entropy, which measures the accuracy of classifying respondents into the defined groups. Entropy values range from 0 to 1, with higher values indicating better fit and lower error rates (Hanke et al., 2015). An entropy value close to 1 suggests that the model effectively differentiates between subgroups within the sample. Therefore, determining the optimal number of latent profiles involves balancing the results from AIC, BIC, and Entropy to achieve the most accurate and meaningful classification.

The identification of groups a posteriori using LPA can provide insights into the conceptualization of groups. This approach can also be utilized within the realm of social

representations, introducing alternative criteria for defining groups. The following discussion will outline how this methodology can be integrated with the theory of social representation, emphasizing the alignment between LPA's methodological assumptions and the theoretical constructs regarding social representations.

### **Latent Profile Analysis and Social Representations: Theoretical and Methodological Articulations**

In discussing the application of quantitative methodologies to the field of social representations of history, Liu (2013) highlights the significance of cluster analyses in understanding representational phenomena. Liu argues that latent profiles reveal specific representational fields and, consequently, distinct systems of thought that can be associated with particular social contexts. In this regard, there is a notable alignment between the methodological foundations of LPA and the theoretical principles of social representations, particularly the societal approach developed by Willem Doise. Doise and colleagues at the *École de Genève* explored social representations from a societal perspective, focusing on the non-consensual aspects and emphasizing how individuals' insertions and social contexts contribute to variations in social representations (Almeida, 2009).

The societal approach was notably developed in response to Pierre Bourdieu's contributions to the theoretical field of social representations. According to Doise (1986), social representations are organizing principles for positioning and are not necessarily a set of completely shared knowledge. Rather, they can result from diverse and opposing viewpoints among different individuals concerning common objects. In this context, Bourdieu's concept of structural homology becomes crucial, as it illustrates the correlation between an individual's social thinking and their position within the social structure (Bourdieu, 1987; Tafani & Bellon, 2001).

The analysis of the dissonant aspects of social representations is embedded in what Doise refers to as the "Three-Phase Paradigm" (Doise, 2002; Doise et al., 1993). This paradigm consists of three hypotheses regarding the analysis of social representations and aims to illustrate the dynamic nature of the representational field in relation to variations in individual positioning. The Three-Phase Paradigm reflects the societal approach's intent to delve into the psych-sociological dynamics involved in the formation of social representations, ranging from consensual levels to differences in social positions. The three hypotheses are as follows:

**1. The Common Field of Social Representations:** This concept refers to the idea that different members of society share certain common beliefs and representational content about a particular social object.

**2. Variation in Individual Position Taking:** This hypothesis acknowledges that individuals differ based on their distinct relationships with the representational object.

**3. Anchoring of Individual Differences:** This hypothesis suggests that these differences are rooted in distinct symbolic realities, linked to specific social positions, and grounded in unique value hierarchies that influence variations in individuals' positions regarding the object.

In parallel, Ferguson et al. (2020) argue that Latent Profile Analysis (LPA) is based on three main premises. The first is that individual differences are present in social dynamics. The second is that these differences are organized according to patterns and in a logical manner. Lastly, only a small number of patterns apply to specific individuals. These three arguments align closely with Doise's (2002) Three-Phase Paradigm, as LPA enables: 1) the identification of what is consensual among all individuals (the common field); 2) the examination of how individuals are classified into groups based on different response patterns (Variation in Positioning); and 3) the differentiation of which types of



social regulations account for specific responses (Anchoring of Individual Differences). LPA operates on the premise that individuals are different but similar within groups, thereby providing insights into both the consensual aspects among participants and the variations in individual positioning-taking concerning observable variables

The application of LPA in the study of social representations could demonstrate a criterion for conceptualizing collectives: **units of shared thought**. In this context, the similar thoughts identified through LPA could help categorize individuals into specific groups, not solely based on macrosocial similarities (Taxonomic Groups) or a presumed shared identity among members (Structured Groups). Building on these possibilities, this article seeks to extend the discussion initiated by Liu (2013) by demonstrating not only that LPA can be applied within the realm of social representations but also how this methodology can facilitate connections with the societal approach and the three-phase paradigm. To illustrate the integration of LPA with the three-phase paradigm, the article will present data from a study on social representations of Brazilian history. This study employed a framework that combines the societal approach to social representations with LPA, aiming to enhance the understanding of group differentiations and variations in positioning-taking.

### **Empirical Application: Social Representations of Brazilian History**

The positioning of groups within the Brazilian public sphere is interwoven with a social fabric characterized by a high degree of intergroup differentiation. This pattern results, among other factors, from conflicts between distinct values and belief systems. These intergroup differentiations manifest in the Brazilian public arena through various channels, including diverse understandings of the national historical past. Thus, affiliation with a specific group dynamic highlights the core aspects that differentiate it from other groups. Consequently, analyzing social representations of Brazilian history provides a

rich context for understanding the intergroup dynamics that influence positioning and the construction of the national past. The study of historical memory related to major Brazilian events aids in comprehending the cultural and symbolic foundations that structure the recollection of the social past, as well as how this knowledge is materialized through different group affiliations. By utilizing LPA (Association Pattern Learning), this study aimed to explore both shared and divergent memories among various social groups regarding key events in Brazilian history, as well as the organizing principles that drive the positions taken toward the national past.

### ***Participants***

The participants in this study were Brazilian individuals aged 18 and older, who were literate and agreed to take part in the study. Children and adolescents under 18, illiterate individuals, foreigners, and those who did not complete the questionnaire correctly were excluded. A broad sample was collected to identify group affiliations a posteriori using LPA.

A total of 420 Brazilian individuals participated in the study. Of these, 202 were aged between 18 and 30 years (48.1% of the sample). The next largest group consisted of individuals aged between 45 and 65 years (111 participants). Additionally, 98 participants were between 30 and 45 years old, and 9 were older than 65 years.

Regarding gender, 264 participants were women (63%) and 150 were men (35.7%). The self-reported ethnicity of the participants was primarily White (237 individuals), Brown (139 participants), Black (33 individuals), Yellow (5 individuals), and Indigenous (2 participants). In terms of political affiliation, 41.1% of participants (173 individuals) identified with the left, 34.7% (146 individuals) with the center, 9.6% (40 individuals) with the right, and 14.6% (74 individuals) did not align with any political field.

### ***Instrument***

This study utilized an online questionnaire consisting of a list of 10 notable Brazilian historical events. The events included in the list were compiled based on a preliminary study conducted by the authors, which aimed to identify significant events in Brazilian historiography or, following Doise's (1986) perspective, to analyze representational consensus about the national past. This preliminary study, which involved a sample of 126 Brazilians, revealed that the recall of historical events was influenced by two main factors: chronological proximity and the impact of educational contexts. Specifically, events from the 1980s, such as the Brazilian Military Dictatorship and the 1988 Federal Constitution, were more prominently recalled. Simultaneously, the evocation of historical events was related to the educational system, marked by specific divisions and historical periods (Wertsch, 2002). Thus, events such as the Discovery of Brazil, Independence, and the Proclamation of the Republic were consensually remembered. More recent events, for example COVID-19 pandemic in Brazil and the 2022 Presidential Election, were also mentioned.

The list used in this second study included the following Brazilian historical events: Arrival of the Portuguese Royal Family (1808), Independence of Brazil (1822), Abolition of Slavery (1888), Proclamation of the Republic (1889), Brazilian Military Dictatorship (1964-1985), Free Vote Movement (1983-1984), 1988 Federal Constitution, Real Plan (1994), COVID-19 Pandemic in Brazil (2020), and 2022 Presidential Election.

Participants were asked to rate their positive and negative emotions regarding each historical event on a scale from 1 to 7. The survey was structured as follows: "Below is a list of Brazilian historical events. Please rate the intensity of your negative and positive emotions about each event (on a scale from 1 to 7, where 1 = extremely negative, 4 = neutral, and 7 = extremely positive). Please evaluate all historical events, even if you

are not very familiar with them”. At the end of the questionnaire, there was a section for collecting socioeconomic data (age, gender, race, political affiliation, and education level). The questionnaire was designed based on the study by Hanke et al. (2015).

## **Results**

The participants' responses were analyzed using LPA in RStudio. A model was established to identify between 1 and 10 possible subgroups within the sample. This range was selected based on the number of variables considered, as larger groupings beyond ten might not accurately represent the sample (Spurk et al., 2020). The second stage involved Model Evaluation (Bolck et al., 2004). Analysis of the three main static indicators (AIC, BIC, and Entropy) revealed that defining 6 subgroups provided a statistically sound fit for the sample. Consequently, the decision was made to adopt a model with six distinct groups. Based on the identified latent profiles, the study discussed the consensuses and dissensions highlighted by LPA, using Doise's three-phase paradigm as a framework: 1) Common Field, 2) Variations in Positioning, and 3) Anchoring of Individual Differentiations.

### **Consensus and the Common Field of Social Representations**

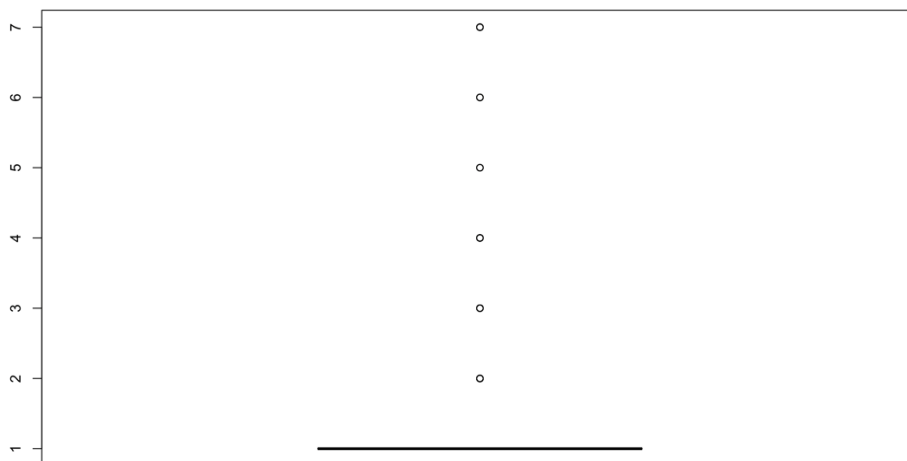
Consensuses play a crucial role in shaping social representations, facilitating the sharing of common values and fostering the establishment of a collective symbolic framework (Doise, 2002). An analysis of the responses from the six identified profiles revealed that these groups exhibit similar characteristics of thought, specifically elements belonging to what is referred to as the Common Field of social representations

The evaluation of these similar response patterns can be conducted using the Boxplot technique in RStudio, along with the TidyLPA package, which executes the LPA. The Boxplot technique is a statistical tool that allows for the systematic organization of a dataset. It presents the data in the form of a rectangle oriented within a coordinate system,

where the vertical axis represents the scale of the dataset (Benjamini, 1988). The rectangle displayed by the Boxplot visually illustrates the variation in the responses, demonstrating the diversity of the answers. Additionally, the tool includes a line across the rectangle that indicates the mean value of the responses. This facilitates the identification of events that received more similar responses. In the study, one historical event showed a pattern of similar responses among the six groups: the Covid-19 pandemic in Brazil. Figure 1 displays the distribution of participants' responses as represented by the Boxplot regarding the positive and negative emotions associated with the Covid-19 pandemic.

**Figure 1**

*Distribution of Participants' Responses to Positive and Negative Emotions Regarding The Covid-19 Pandemic In Brazil*



Fonte. Created by the authors.

Figure 1 demonstrates that responses regarding this event predominantly remained at a score of 1 (extremely negative), as indicated by the segment of the line next to this score. It also shows that responses ranging from 2 to 7 were minimally identified, represented by the small circles adjacent to these scores. Moscovici and Doise (1994) suggest that the element of implication is crucial for the consolidation of consensuses, particularly in contexts marked by strong polarization. The Covid-19 pandemic emerged

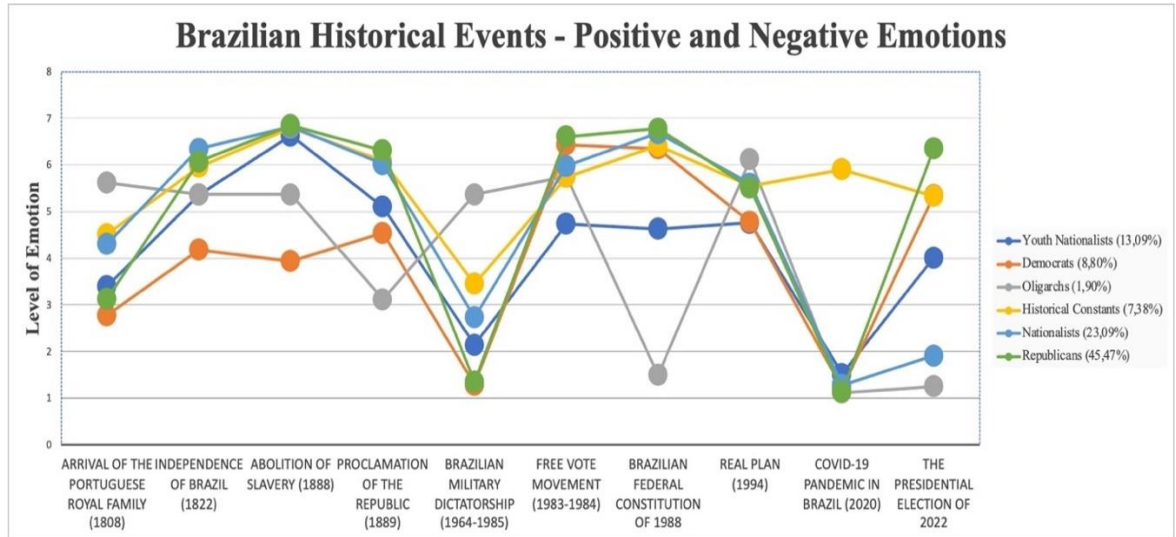
as a phenomenon that confronted societies, highlighting the need to adopt new practices, such as mask-wearing and physical distancing, while also reshaping the understanding of reality (Apostolidis et al., 2020). As a result, individuals were compelled not only to make sense of this new social configuration but also to seek explanations for changes in their daily practices. In summary, the common field identified among the six groups can be understood through individuals' implications. However, the analysis conducted through LPA goes beyond just what is common and shared. By understanding the consensus, it becomes possible to grasp intergroup variations in latent profiles. In this context, the next section will discuss the second hypothesis proposed by Doise, focusing on variations in stance-taking

### **Group Variations in Position-Taking**

The second hypothesis proposed by Doise focuses on analyzing the nature of differences and the plurality of stances that may exist regarding social objects (Almeida, 2009). Based on the evaluation of the response patterns from the six subgroups, the classification and naming of the six profiles in the sample were conducted. Figure 2 presents the estimated mean values for the evaluation of positive and negative emotions associated with each historical event for each of the six latent profiles, along with their percentages relative to the total sample. These six representational profiles have been named: Nationalists, Youth Nationalists, Democrats, Oligarchs, Historical Constants, and Republicans.

**Figure 2**

*Latent Profiles and Average Evaluation of Positive and Negative Emotions For Each Historical Event.*



Fonte. Created by the authors.

The first profile was named *Nationalists*. This group includes individuals who rated events that represent Brazil's interests and autonomy with a high level of positive emotion. Nationalists show a favorable assessment of events that contributed to the construction of a national identity, such as Brazil's Independence and the Proclamation of the Republic. In contrast, they assign lower ratings to historical events that do not involve Brazil, such as the arrival of the Portuguese royal family. The Nationalists comprised a total of 31 individuals, with a significant majority being over 30 years old, representing 58% of the group.

A second subgroup emerged within this nationalist stance. This group continues to hold a highly positive view of events like Independence and the Proclamation of the Republic but exhibits lower ratings for events from the 1980s, such as the Free Vote Movement and the 1988 Federal Constitution. At the same time, there is a strong positive assessment of the 2022 presidential election. Among those with this response pattern, a higher presence of individuals aged 18 to 30 is noticeable. Thus, within these more

nationalist evaluations, a second response pattern is associated with younger individuals, distinguishing them as *Youth Nationalists*. This profile accounted for 13.09% of the sample.

The third subgroup was identified as *Democrats*. This latent profile values historical events that embody principles of equality and citizenship, such as the Free Vote Movement and the 1988 Federal Constitution, often referred to as the “Citizen Constitution”. Conversely, this subgroup negatively assessed events that represent power imbalances, such as the arrival of the Portuguese royal family and the Brazilian Military Dictatorship. This response profile represented 8.80% of the sample.

The fourth latent profile identified was termed *Oligarchs*. This group exhibits a very positive evaluation of events that signify the maintenance of power within specific sectors or groups. Notably, historical events such as the arrival of the Portuguese royal family and the Brazilian Military Dictatorship receive particularly high ratings. Conversely, events that reflect a more egalitarian perspective, such as the 1988 Federal Constitution, are evaluated negatively.

The fifth profile was named *Historical Consistents*, representing 7.38% of the sample. In this response pattern, it was observed that all evaluations of Brazilian historical events were rated similarly. Apart from the Military Dictatorship, all ratings from participants in this latent profile were above 4.5, indicating a generally high but non-specific evaluation. This response pattern was also found in the original study by Hanke et al. (2015) on global historical figures, which influenced the naming of this profile.

Finally, the sixth latent profile was called *Republicans*. This subgroup accounted for 45.47% of the sample. Individuals in this profile demonstrate a response pattern focused on the preservation of rights and civic participation. These emphases are characterized by scores positioned at the extremes. In this context, there is an extremely



positive evaluation of events like Brazil's Independence and the Abolition of Slavery, while extremely negative ratings are assigned to the arrival of the royal family and the military dictatorship. Regarding more recent events, there is a highly favorable assessment of the 1988 Constitution and the 2022 presidential election. Thus, a clear delineation is observed, with a strong opposition to events associated with more authoritarian measures.

The groups delineated by LPA not only express distinct understandings of the national past but also highlight different elements involved in the construction of social representations. According to Doise (1986), organizing principles can be understood as principles of opposition and hierarchy that manifest and intervene in various relational contexts. Thus, the variations in stances regarding historical events can be comprehended through these organizing principles, which promote individual differentiations. From the analysis of stance variations, it became necessary to delve deeper into these distinctions evident among the subgroups, specifically in the relationship between the metasystem and cognitive dynamics. This leads to the third investigative hypothesis proposed by Doise: Anchoring of Individual Differentiations.

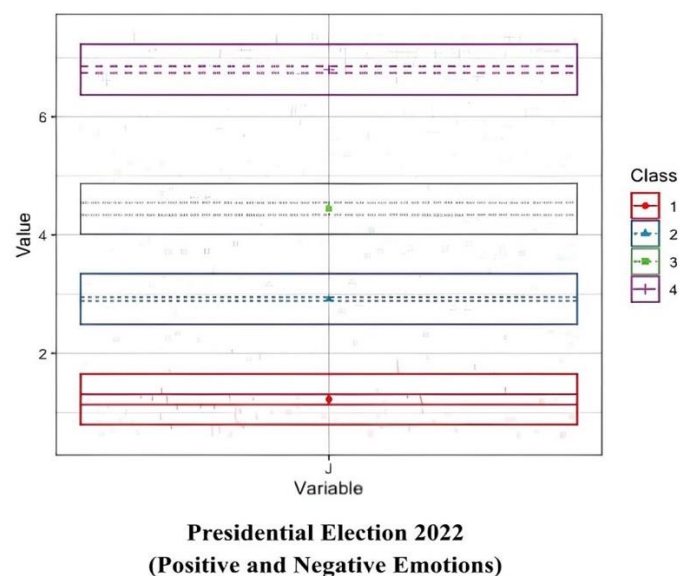
### **Anchoring of Individual Differentiations**

According to Doise (1992), anchoring is an essential element for understanding how variations in stance-taking are linked to the symbolic realities to which individuals belong. In the study of social representations of Brazilian history, the event with the greatest variation in responses among participants was selected to illustrate the role of anchoring processes. This event was the 2022 presidential election. Choosing this event to investigate the anchoring of individual differentiations allowed for a more thorough evaluation of the value systems that define the field and their relationship with positioning-taking. To achieve this, a second latent profile analysis was conducted solely

with responses regarding the positive and negative emotions associated with the 2022 presidential election. This analysis aimed to identify response patterns related to this event and the social regulations linked to individuals' positions. Figure 3 presents the subgroups within the sample, along with the stance taken by each profile.

**Figure 3**

*Latent Profile Analysis Conducted with Participants' Responses on The 2022 Presidential Election*



Fonte. Created by the authors.

As shown in Figure 3, the LPA analysis identified four subgroups. Group 1 (Red) consists of individuals who rated the election with an extremely negative valence. Group 2 (Blue) includes participants who responded with scores between 2 and 3 on the scale, also reflecting a negative stance. Group 3 (Green) comprises individuals who rated the event between 4 and 5, indicating a more neutral-positive position. Finally, Group 4 (Purple) encompasses those who rated the election as extremely positive, with scores ranging from 6 to 7. The variations in how individuals position themselves regarding the event indicate anchoring related to specific social affiliations. Furthermore, the stance variation is anchored in a value system aligned with individuals' political affiliations. In

this context, participants' political orientation shapes their understanding of the event, leading to variations in their positions. As participants connect to distinct symbolic realities (related to political orientation), these variations in positioning materialize. Table 1 presents the frequency of participants in each group and the distribution of political orientations (Right, Center, Left, and Other)

**Table 1**

*Distribution of the Political Affiliations of The Subgroups in Relation To The 2022 Presidential Election*

	Right-wing political affiliation	Center political affiliation	Left-wing political affiliation	Another political affiliation	Total Subgroups
<b>Group 1 (Red)</b>	23	41	10	22	96
<b>Group 2 (Blue)</b>	5	10	8	6	30
<b>Group 3 (Green)</b>	4	42	27	19	93
<b>Group 4 (Purple)</b>	52	7	125	17	201
<b>Total</b>					<b>420</b>

Fonte. Created by the authors.

Table 1 illustrates that the groups' positions regarding the election are anchored in specific political orientations, revealing a shift in political affiliations as their stances on the event change. This indicates that political affiliations can be understood as a form of sociological anchoring (Doise, 1992). As argued by Doise, sociological anchoring relates to the social memberships individuals occupy. Thus, being part of the same group allows individuals to grasp shared experiences and common interests, facilitating the exchange of values that influence their positions. In this context, the presidential election embodies clashes between distinct value systems, promoting variations in stance primarily driven by political affiliations. These differentiations, rooted in political orientations, reflect distinct organizing principles that materialize the antagonistic landscape surrounding the

collective national past, becoming a source of opposition between groups and fostering variations in stance-taking.

Similar to these findings, Deschamps and Moliner (2009) argue that when a criterion is predominantly used to define one group in relation to political affiliations, the same characteristic is often disregarded for another group. This results in a clear and explicit differentiation between the groups, each representing a distinct hierarchy of values, such as the pursuit of equality *versus* the perpetuation of social discrimination. Political orientation, therefore, can foster a strong division between "us" and "them." The variation in positing-taking based on political affiliation influences differing perspectives on the past, highlighting the context of social polarization evident in contemporary Brazilian society.

### **Conclusion**

The construction of social representations is embedded within asymmetries of collective identities. In this context, individual differences can be assessed through variations in the metasystem, as representations may undergo transformative processes depending on an individual's position within the social structure, thereby influencing specific cognitive functions (Doise, 1986).

Research developed from the societal approach of social representations has led, among other factors, to the creation of quantitative methodologies for studying intergroup relations (Doise et al., 1993). Analyzing the non-consensual aspects of representations, as well as the role of social affiliations in stance-taking, reveals a rich area for employing computational technologies that situate individuals within their groups of belonging. In this framework, this article aimed to present LPA as an important methodological tool for studying intergroup relations within the theory of social representations. The use of LPA has facilitated a detailed examination of how individuals' social regulations (i.e., social

positions) impact representational content. Furthermore, employing LPA has underscored its relevance particularly within the three-phase paradigm (Doise, 2002), enabling the understanding of both consensual elements and those that are dissonant within social thought.

Thus, LPA provides a statistical validation of the relationship between social positions and positioning-taking. Consequently, it offers a more precise assessment of social affiliations linked to attitudes toward various social objects. This article emphasized that, unlike other clustering methodologies, LPA presents a significant advantage in identifying groupings, as it can classify groups based on the criterion of similar units of thought rather than relying solely on criteria established by the researcher.

It should be noted that this discussion regarding the use of LPA in social representation studies is not intended to replace the conceptualizations of groups employed in research related to macrosocial similarities (Taxonomic Groups) or shared social identities (Structured and Reflexive groups). Instead, the aim is to demonstrate another criterion that can serve as a foundation for defining collective. The criterion provided by LPA for conceptualizing groups allows for an integration with social representations, offering a fertile ground for analyzing the divergent aspects that permeate social thought and stance-taking (Moscovici & Doise, 1994).

Regarding the limitations of this methodology, it is believed that the potential of LPA can be maximized when used in conjunction with other types of factor analyses. This combined approach would reaffirm and ensure the correlation between specific representational dynamics and social positions. Employing additional factor analyses alongside LPA could enhance the robustness of group conceptualizations, allowing for the classification of collectives based on this criterion of similar units of thought. Furthermore, additional studies on diverse social objects may provide new theoretical and

methodological insights into the statistical correlations facilitated by LPA between social insertions and positioning-taking within the realm of social representations. Thus, it is believed that the use of new quantitative methodologies within this theoretical framework can deepen the understanding of not only the consensual aspects among groups but also the regulations that foster differentiations and variations in the representational field.

### **Notes**

<sup>1</sup>The Real Plan was a major program to stabilize the Brazilian economy launched during the government of President Itamar Franco in 1994. The plan aimed to reduce the hyperinflation that had been affecting the country since the 1980s. As a result, the program launched the Real currency, which is still in effect in Brazil today.

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