The Persuasive Power of Visual Elements in Strategic Communication

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Abstract. Symbolic interactionism provides a robust framework for understanding how meaning emerges through social exchange—a process now transformed by algorithmic platforms. This study examines how symbols within standout frames of TikTok videos influenced engagement during Taiwan's 2024 presidential election. Using Vision and Large Language Models, we identified visually salient moments and categorized them based on social, cultural, and political symbolic content. Our findings reveal that videos containing multiple symbol types generated significantly higher engagement metrics and emotional responses. Cultural symbols, especially when combined with political imagery, showed the strongest association with trust-building behaviors. This research extends symbolic interactionism theory to digital environments while advancing methodological approaches for analyzing visual political communication in short-form video. The results demonstrate how TikTok's algorithmic amplification of symbolically rich content shapes political participation during democratic processes.

Keywords: Symbolic Interaction Theory, LLM, Semiotics, TikTok, Social, Cultural, Political

1 Introduction

Symbolic Interactionism posits that human interaction is mediated through symbols whose meanings are socially constructed and continuously negotiated [4]. In today's algorithmically driven media landscape, this meaning-making process has become increasingly dynamic, with platforms like TikTok enabling the rapid dissemination of symbols through visually compelling video. Focusing on Taiwan's anti-disinformation campaign during the highly contested 2024 presidential election, this study investigates how social, cultural, and political (SCP) symbols embedded in standout TikTok frames influenced user engagement, emotional responses, and trust in democratic processes.

Standout frames—identified using advanced video processing [1] and color space analysis—capture moments of visual and symbolic transition. These condensed frames serve as symbolic anchors in TikTok's fast-paced format, conveying ideologically rich messages in emotionally impactful ways. The 2024 Taiwan

election provides a timely and relevant case for examining how different symbols function in digital civic expression. As geopolitical tensions persisted in the election, TikTok content reflected a wide array of symbolic representations, from traditional political imagery to culturally resonant signifiers.

To analyze their effects systematically, we classified frames based on the number and types of distinct symbols present in the frames, which drove this study with the following research questions:

- **RQ1:** To what extent do symbolic elements influence user engagement metrics?
- **RQ2:** How do symbolic elements contribute to emotional effervescence?
- **RQ3:** How do symbolic elements foster trust-building in the context of democratic processes?

This study bridges Symbolic Interaction Theory with computational analysis, extending classical meaning-making theories to algorithmically mediated environments while examining how TikTok transforms political symbols into mobilization tools. Our research contributes to political psychology by analyzing how symbolic content activates emotional pathways, advances communication ethics through exploring trust formation in disinformation-prone spaces, and enhances digital anthropology by examining national identity negotiation in platform contexts. These interdisciplinary perspectives offer a comprehensive framework for understanding symbolic communication in digital political spaces, with implications for democratic engagement globally.

2 Literature Review

The literature review lays the theoretical groundwork for analyzing the role of symbols in digital political communication, which provides the context for our exploration of different symbols that shape user engagement, emotional dynamics, and trust during the 2024 Taiwan election discourse.

2.1 Role of Semiotics in Communication Study

Semiotics—the study of how signs and symbols communicate meaning—offers a valuable lens for understanding how people create, interpret, and share meaning across various social settings. In digital spaces, where traditional cues blend with new forms of expression, Symbolic Interaction Theory provides a framework for examining how individuals convey emotions, values, and cultural messages through both explicit and subtle symbols. Semiotic communication involves three key components: the sign itself, its interpretation, and the social context in which it is used. These visual, verbal, or gestural signs carry meanings shaped by cultural norms and reinforced through social interaction. The rise of social media has amplified symbolic communication, with platforms like TikTok becoming spaces for exchanging and reshaping meanings. Digital environments

blend traditional communication with newer elements such as hashtags, emojis, and memes—each functioning as tools for expression, identity-building, and community formation across linguistic and cultural divides [5].

Research shows how symbols contribute to building trust online, with Jenkins highlighting how shared symbols in participatory cultures foster belonging and trust, while other sources demonstrated how symbolic content in networked societies drives emotional engagement and influences perceptions of trust and authority perspectives particularly relevant to understanding how digital symbols shape political discourse on platforms like TikTok [6].

2.2 TikTok's Role in Modern Political Movement

Social media has transformed political engagement, with TikTok emerging as particularly influential among younger generations. As Generation Z's third-most-used social app, its short-form video format and personalized algorithm have created new pathways for political communication among digitally native users [7]. Research demonstrates TikTok's multifaceted impact—shaping political perspectives, encouraging participation both online and offline, and facilitating knowledge dissemination among marginalized communities [8].

This study examines how symbolic communication on TikTok influenced political behavior during Taiwan's 2024 election. The platform creates a unique environment where social symbols manifest in user interactions, cultural references are creatively reimagined, and political symbols are reinterpreted through platform-specific features. TikTok's algorithm amplifies symbolic content, intensifying its impact on engagement, emotional resonance, and trust formation, while its viral potential and interactive features enable political mobilization and collective action where users can quickly respond to symbolic content [9]. Understanding how TikTok's format and algorithmic structure shape political discourse offers valuable insights into digital civic engagement, particularly in geopolitically significant contexts like Taiwan.

2.3 Data Annotation using LLM

The emergence of Large Language Models (LLMs) marks a significant advancement in multimedia content analysis, substantially enhancing the automation of both visual and textual data processing across domains. Fujimoto's [10] work demonstrated GPT-4's image understanding capabilities, with their zero-shot classification framework extracting attributes from images through prompt engineering at accuracy levels rivaling manually trained ResNet-50 models. Similarly, Liyanage et al. [11] showed LLMs' effectiveness in interpreting nuanced textual data in social media contexts, providing insights applicable to multimodal analysis.

GPT-4's capacity to grasp subtle social cues and contextual meanings makes it particularly effective for analyzing symbolic content in political discourse, identifying cultural references and implicit emotions crucial for understanding Taiwan's 2024 election [12]. Recent advancements include Google's Gemini 1.5

for processing massive multimodal inputs and open-source alternatives like the mistral-nemo-minitron-8b-base model with strong multilingual capabilities for Mandarin content. These developments offer scalable, accurate alternatives to traditional annotation workflows, transforming how researchers analyze multimedia political communication and symbolic meaning at scale.

3 Background & Data Collection

This section establishes the contextual foundation for our examination of symbolic elements in digital political communication during Taiwan's electoral period.

The 2024 Taiwanese presidential election marked a significant chapter in the country's democratic development, occurring on January 13, 2024, amid growing regional tensions. The race featured three distinct political agendas: Lai Ching-te of the Democratic Progressive Party (DPP) advocated for maintaining Taiwan's current autonomous status; Hou Yu-ih of the Kuomintang (KMT) promoted closer cross-strait relations; and Ko Wen-je of the Taiwan People' s Party (TPP) centered his campaign on domestic policy reform. One of the defining aspects of this election was the active involvement of Taiwanese citizens in combating misinformation. Community-driven efforts such as digital literacy campaigns and collaborative fact-checking initiatives played a crucial role in safeguarding electoral integrity [14].

To examine symbolic communication and political information diffusion [30] on TikTok during Taiwan's 2024 election, we implemented a phased research framework. Our methodology began with identifying key terms through mainstream news analysis and expert consultation, ensuring our keyword selection captured relevant themes while minimizing dataset noise.

Using this refined set of search terms [32]—such as 'DemocraticProgressiveParty', 'DPP', 'KoWenje', 'KumintangParty', 'Kuomintang', 'LaiChingte', 'Mygopen', 'NewPowerParty', 'prayfortaiwan', 'SpeakOutDontFight', 'TaiwanPresidentialElection2024', 'TsaiIng-wen', 'votefortaiwan', 'whiteterror', 'WilliamLai', '民進党' (Democratic Progressive Party), '蔣介石' (Chiang Kai-shek), '中國國民黨' (Chinese Nationalist Party), '侯友宜' (Hou Yu-ih), '台灣民眾黨' (Taiwan People's Party), '台灣總統大選 2024' (Taiwan Presidential Election 2024), '國民黨' (Kuomintang), '民主進步党' (Democratic Progressive Party), '白色恐怖' (White Terror), '立委選舉' (Legislative Yuan Election), '總統大選' (Presidential Election), '蔡英文' (Tsai Ing-wen), '蕭美琴' (Hsiao Bi-khim), '賴清德' (Lai Ching-te), '選前之夜' (Night Before the Election)—we compiled a dataset of 532 TikTok videos uploaded between January 13 and January 27, 2024. This targeted timeframe and platform-specific focus enabled us to capture symbolic messaging tailored to TikTok's unique audience and affordances. The resulting dataset provided a rich foundation for analyzing how content creators leveraged symbols to engage viewers and shape narratives during a critical moment in Taiwan's political discourse.

4 Research Approach

This section presents our systematic approach to examining how symbolic content influences user engagement, emotional reactions, and trust within TikTok posts during Taiwan's election period. It details the analytical methods and tools used to derive insights from the dataset.

We begin with the processes of data annotation which followed by selecting the most suitable LLM model based on performance benchmarks and subsequent analyses of engagement, emotion, and trust.

4.1 Symbol Categorization & Data Annotation

To examine symbolic communication in Taiwan's 2024 election discourse, we categorized TikTok video frames both by number of symbols present (1, 2, or all 3) and by symbol types: Social, Cultural, and Political. We selected these categories based on their established importance in democratic processes and digital civic engagement.

Social Symbols represent shared norms and group identities (e.g., protest gestures, social attire) that facilitate solidarity and collective action—essential elements in Taiwan's context where social movements have historically influenced electoral politics. **Cultural Symbols** include traditional markers and practices that reinforce Taiwanese identity and collective memory, particularly significant given ongoing tensions over cultural sovereignty. **Political Symbols** encompass party logos, candidate imagery, and national emblems that signify governance and political allegiance, directly relevant to electoral communication. This classification system, with a "No Symbol" baseline category, allowed us to systematically analyze how different symbolic elements influence engagement and trust in Taiwan's digitally-mediated democratic discourse.

4.2 Selection & Evaluation of LLM

To extract meaningful visual content from TikTok videos, we adapted the "PRISM" framework to identify "standout" frames—key moments of significant visual change likely to carry symbolic meaning [1]. Unlike conventional methods that rely on first frames or thumbnails, our approach focuses on capturing dynamic content shifts, offering a more comprehensive yet computationally efficient alternative to full-frame analysis.

To validate the effectiveness of our multimodal analysis framework, we implemented a two-phase evaluation process focused on symbol detection, followed by emotion and trust classification. This approach allowed us to assess not only the model's ability to recognize symbolic elements in visual content but also its capacity to capture the psychological responses such symbols evoke.

First Phase—Symbol Detection: In the first phase, we examined the model's performance in detecting social, cultural, and political symbols using well-established datasets. For social symbols, we utilized the USED dataset [20], which contains diverse indicators of social affiliation and interaction. Cultural

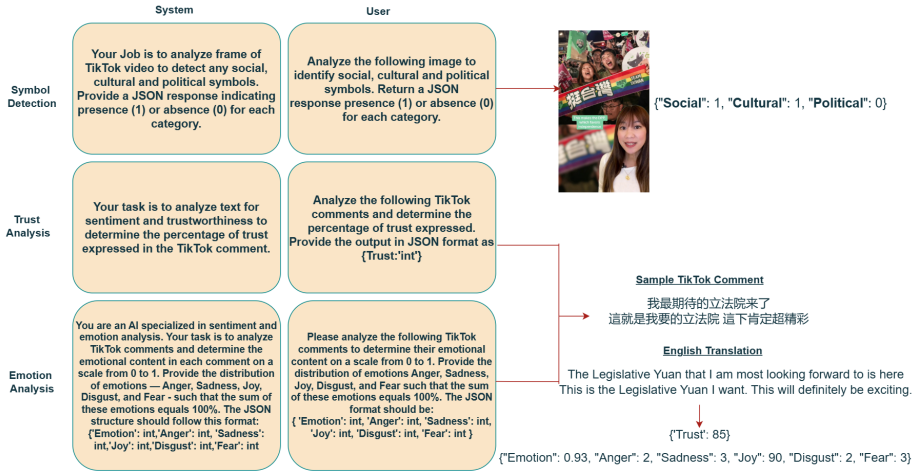

Fig. 1. Exemplar with System & User Prompt

symbolism was assessed through three separate datasets focused on religious iconography, pilgrimage sites, and Indian temple imagery, each capturing distinct dimensions of cultural expression. To evaluate political symbolism, we employed a dataset dedicated to party symbols, campaign visuals, and emblems. Among the models tested, GPT-4o (version 2024-08-06) demonstrated exceptional performance across all categories (**Table 2**), achieving 96% accuracy in detecting social symbols and 99% accuracy for cultural symbols. In comparison, Gemini-Pro (gemini-1.5-pro-001) achieved slightly lower but still competitive results in cultural and political categories, yet performed significantly worse in identifying social symbols, with an accuracy of just 67.56%. Although we initially included the LLaMA model for comparative purposes, its performance fell below 20% accuracy across all tasks, leading to its exclusion.

Table 1. Model Performance on Symbol Detection and Emotion/Trust Evaluation

Symbol Detection			
Symbols	**Dataset**	**Accuracy (GPT-4)**	**Accuracy (Gemini)**
Social	USED [20]	**96.36**	67.56
Cultural	Religious [21], Pilgrim [22], Temples [23]	**99.06**	98.54
Political	Political Parties	**97.30**	94.59

Emotion and Trust Evaluation		
Model	**Trust Accuracy (%)**	**Emotion Accuracy (%)**
ft:gpt-4o-mini-2024-07-18	**87.82**	**80.17**
gpt-4o-2024-08-06	76.92	75.33
gemini-1.5-pro-001	80.18	55.70
mistral-NeMo-Minitron-8B-Base	43.07	52.09

Second Phase—Emotion & Trust Analysis: Building on the success of GPT-4o in symbol detection, we shifted our focus to evaluating the model's capacity to detect trust and emotional cues in textual data. Recognizing that user reactions to symbolic content often manifest through affective and cognitive responses, we aimed to understand how well large language models could capture these psychological dynamics. For this phase, we constructed a unified dataset by merging three widely cited English-language emotion datasets —GoEmotions [25], ISEAR [26], and SemEval [27]—with two Chinese-language datasets: the Chinese Emotion Cause Corpus [28] and Chinese Weibo [29]. Additionally, for Trust Analysis, we utilized the Chinese dataset [19] and MyAnime [17] datasets. The resulting multilingual dataset contained 6,599 data points for emotion and 8000 data points for trust, which were split into a 70:30 ratio for training and validation. This cross-lingual and multi-source dataset provided a robust foundation for assessing model performance in both emotional and trust-related classification tasks.

Using this dataset, we evaluated several leading models, including GPT-4o, Gemini-Pro, and Mistral. We trained a fine-tuned version of GPT-4o-mini and, after several attempts, trained the model over 15 epochs using a learning rate of 0.01, also utilizing relative accuracy as a performance metric.

Relative Accuracy (Trust) is calculated as

$$\text{Relative Accuracy (Trust)} = \left(1 - \frac{\text{RMSE}}{\text{Output Range}}\right) \times 100\% \tag{1}$$

$$\text{Relative Accuracy (Emotion)} = (1 - \text{JSD}) \times 100\% \tag{2}$$

In Equation 2, JSD(Jensen-Shannon Divergence) measures the similarity between predicted and actual emotion distributions. A lower JSD means the distributions are more alike, so the relative accuracy is higher. In both cases, the closer the value is to 100%, the more accurately the model captures trust or emotion.

After parameter tuning and training the model, it significantly improved the accuracy across both tasks. In trust classification, the fine-tuned GPT-4o-mini achieved an accuracy of 87.82%, outperforming both the base GPT-4o model (76.92%) and Gemini-Pro (80.18%), while Mistral lagged far behind with 43.07%. Similarly, in emotion classification, GPT-4o-mini achieved 80.17%, ahead of the base GPT-4o (75.33%), Gemini-Pro (55.7%), and Mistral (52.09%). These results confirm the substantial benefit of fine-tuning, particularly when the task requires interpreting nuanced emotional tones and trust signals embedded in multilingual political discourse.

The decision to fine-tune GPT-4o was driven by the need to enhance its sensitivity to context-specific language cues, especially those unique to political communication during Taiwan's election. While the base model demonstrated strong general capabilities, it lacked the precision required for high-stakes interpretative tasks involving implicit sentiment, culturally grounded expressions of trust, and context-dependent emotional signaling. Fine-tuning enabled the

model to capture these subtleties better, increasing its effectiveness in detecting how symbolic content resonates with audiences and shapes their reactions. Moreover, given the prevalence of Chinese in our dataset, this additional training phase ensured that the model was equipped to navigate cross-lingual and cross-cultural complexities inherent in Taiwan's digital discourse.

This two-phase evaluation—combining visual symbol recognition with refined textual affect detection—offered a robust methodological foundation for our research. It validated the suitability of GPT-4-based models for multimodal content analysis, while also ensuring that the tools we used were finely attuned to the nuanced realities of political communication in the digital age. By aligning our technical framework with the psychological and cultural dimensions of the election, we position this study to generate more meaningful insights into how symbolic content drives engagement, fosters trust, and evokes emotional responses in a digitally mediated democratic context.

4.3 Analyzing Symbolic Influence

To understand the broader impact of symbolic communication in digital political discourse, this section examines how different types and combinations of symbols influence three key dimensions: user engagement, emotional response, and trust formation. These dimensions capture both behavioral and psychological reactions to symbolic content, offering a comprehensive view of how visual and cultural cues shape online interactions during the 2024 Taiwan presidential election. By integrating quantitative engagement metrics with affective and cognitive evaluations, our analysis uncovers the multifaceted role that symbols play in mobilizing attention, evoking emotion, and fostering trust.

Engagement Analysis: Analyzing engagement is essential to understanding the influence of social media in political discourse. Metrics such as likes, comments, shares, and views offer a window into how content spreads, resonates with audiences, and shapes public opinion, particularly during pivotal events like the 2024 Taiwan presidential election. In this context, examining engagement patterns is crucial for assessing the effectiveness of anti-disinformation efforts and understanding broader trends in electoral participation.

Building on our symbol detection framework, we investigated how different types and quantities of symbols correlated with user engagement. Each TikTok post was annotated using two classification systems: one based on the number of symbol types detected, categorized as 1 Symbol, 2 Symbols, or All Symbols, and another based on the type of symbol present—Social, Cultural, Political, or No Symbol. This dual classification allowed us to explore both general and more nuanced patterns of symbolic influence on audience interaction. Our analysis revealed clear trends in how the complexity and diversity of symbolic content impact engagement. By comparing engagement metrics across these categories, we identified which combinations of symbols were most effective at generating interaction and participation.

Emotion Analysis: Symbols play a powerful role in shaping emotional responses within political discourse, especially on visual platforms like TikTok.

Understanding these emotional reactions from different symbols is essential for analyzing how symbolic content influences public perception and engagement.

To investigate this, we analyzed user comments on TikTok posts categorized by the number of symbol types present, ranging from no symbols to all three. Using fine-tuned gpt-4-mini (identified as the best-performing model in Table 2), we classified emotional responses into five categories: joy, sadness, anger, fear, and disgust. Our approach followed a two-step process: first, we measured the overall emotional intensity of each comment; then, we assessed the proportion of each specific emotion expressed. The final emotion score for each category was calculated by multiplying the overall emotional intensity by the corresponding emotion distribution. By combining emotional presence and intensity, this approach avoided overstating weak signals and better highlighted emotionally charged responses. It provided a robust framework for understanding how symbolic content drives emotional engagement in digital political discourse.

Trust Analysis: Following the analysis of emotions, we shifted our focus to understanding how symbolic content contributes to building trust in democratic processes—an especially important aspect of political discourse in digital spaces. Different symbols often serve as visual representations of deeper democratic values and institutional legitimacy. Hence, these symbols resonate most with the public, which is essential for evaluating how trust is cultivated.

To explore this, we analyzed TikTok user comments across different symbolic categories for using fine-tuned gpt-4-mini to assess the level of trust expressed in each comment. Our focus was specifically on trust in Taiwan' s democratic institutions and electoral integrity. Carefully crafted prompts were used to ensure consistency in model output and to scale the analysis across a large dataset. As detailed in Section 4.2, this process was validated across multiple models to ensure reliability.

By examining how different symbolic combinations correlated with expressions of trust, we identified patterns that revealed which types of symbols were most effective in fostering public confidence. This trust analysis added another layer to our findings on engagement and emotion, offering a more complete picture of how symbolic content shapes user attitudes. Ultimately, these insights shed light on the vital role symbols play in sustaining democratic trust in the face of digital disinformation and political polarization.

5 Results & Discussion

5.1 Engagement Analysis

In the first part of our engagement analysis, we aimed to determine whether the presence of symbolic content had any discernible impact on user interaction during the Taiwan presidential election. By comparing posts with no symbols to those containing one, two, or all three symbol types, we found clear differences in engagement patterns. Content containing two symbols generated the highest number of likes and comments, averaging 7,800, followed closely by posts

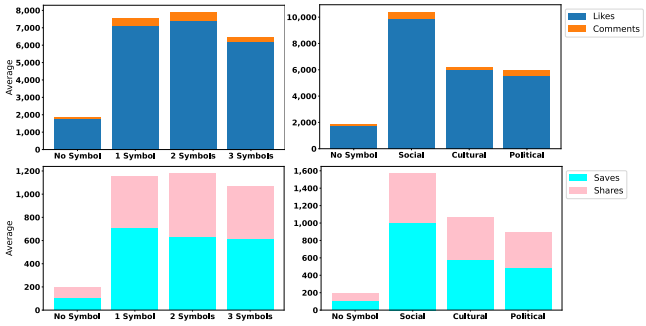

Fig. 2. Engagement Analysis for Symbol Numbers (left-Top & Bottom) and Types (right-Top & Bottom)

with one symbol (7,400). Interestingly, posts with all three symbol types saw a slight drop in engagement (6,300), while no-symbol posts had the lowest interaction levels (1,800). This pattern suggests that moderate symbolic complexity may strike the optimal balance for user engagement, offering enough visual and narrative cues without overwhelming the viewer.

Save and share metrics further supported these findings. Posts with one or two symbols showed the strongest preservation and distribution activity, each averaging 1,100 combined saves and shares. Content with all symbols also performed well in this regard, suggesting that while richer symbolic content may not always drive immediate engagement, it may encourage users to revisit or share the content, potentially reflecting deeper contemplation or perceived value.

Encouraged by these results, we proceeded to the next stage of analysis, which focused on identifying specific types of symbols. This symbol-type analysis revealed that posts featuring social symbols consistently drove the highest interaction, accumulating approximately 10,000 combined likes and comments. Cultural and political symbols produced moderate engagement, 6,000 interactions each, while content without any symbols again showed the least activity (2,000). A similar trend was observed in save/share metrics: social symbols led with 1,500 saves and shares, whereas cultural and political content showed lower but consistent engagement, and no-symbol posts recorded minimal interaction.

These findings confirm that both the quantity and type of symbolic content play meaningful roles in driving user engagement on social media during political events. This provides strong evidence in support of **RQ1**, highlighting the significance of symbolic communication in shaping political discourse online.

5.2 Emotion Analysis

The emotion analysis was conducted in two phases to understand how symbolic content influences affective responses during the 2024 Taiwan presidential election. In the first phase, we examined whether the presence and quantity of symbols in TikTok video frames had any measurable effect on user's reactions.

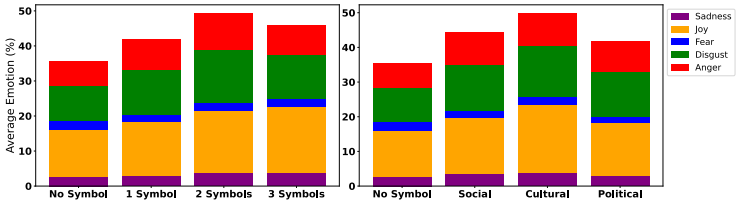

Fig. 3. Emotion Analysis for different quantities (Left) and types (Right) of Symbols

The results indicate that symbolic content significantly enhances emotional engagement. Posts with two symbol types elicited the strongest overall emotional expression, with average emotion levels approaching 50%. This was followed closely by content containing all three symbol types and single-symbol posts, both of which also demonstrated elevated emotional intensity. In contrast, posts without any symbols showed the lowest emotional response, underscoring the limited emotional appeal of non-symbolic content. Across all categories, joy emerged as the most dominant emotion, while disgust and anger also appeared prominently, reflecting a complex blend of positive and negative affect. Sadness and fear were present at relatively lower but consistent levels, adding nuance to the emotional landscape and addressing **RQ2**. Encouraged by the observation that symbolic content indeed influences emotional reactions, we proceeded to the second phase of analysis, which aimed to identify the specific types of symbols that were most emotionally impactful. As shown in Figure 2, TikTok posts are categorized by the type of present symbol—Social, Cultural, Political, or No Symbol. This analysis revealed that cultural symbols produced the highest overall emotional response, driven largely by elevated expressions of joy and disgust. Social symbols also triggered significant emotional engagement, particularly in terms of joy and anger. Political symbols, while still emotionally charged, appeared to provoke more negative reactions, with higher levels of disgust and anger compared to other categories. Once again, content without symbolic elements generated the lowest levels of emotional expression.

These findings demonstrate that not only the presence but also the type and quantity of symbolic content can shape emotional engagement in meaningful ways. The results suggest that moderate symbolic complexity, such as the presence of two distinct symbol types, may strike the optimal balance for emotional stimulation. Additionally, cultural and social symbols appear to resonate most positively with users, possibly due to their connections with traditional identity.

5.3 Trust Analysis

The trust analysis was conducted in two stages to examine how symbolic content contributes to building trust in democratic processes, especially in the context of Taiwan' s 2024 presidential election. The first part of the analysis focused on the quantity of symbols present in TikTok video frames, aiming to assess whether an increase in symbolic complexity influenced users' expressions of trust.

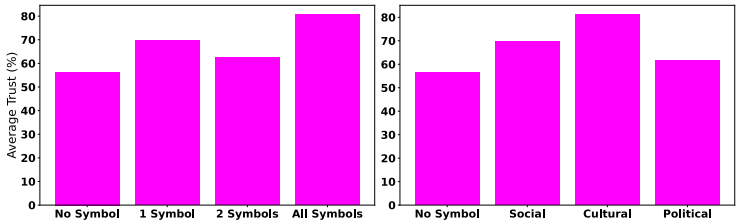

Fig. 4. Trust Analysis for different quantities (Left) and types (Right) of Symbols

As shown in the Fig. 4, posts that included all symbol types elicited the highest average trust **RQ3**, with scores exceeding 80%. This was followed by posts containing a single symbol, which generated approximately 70% average trust. Posts with two symbols showed slightly lower trust levels, averaging 62%, while no-symbol content recorded the lowest trust, at just under 57%. These findings suggest that symbolic presence alone significantly enhances trust-related responses, with comprehensive symbolic representation (i.e., all symbols combined) having the most substantial effect. Interestingly, while two-symbol content performed better than no-symbol content, it did not exceed the trust level seen in single-symbol posts, hinting at the possibility that clarity of a single symbol may sometimes be more effective than blended symbolic messaging.

Building on these insights, the second phase of analysis investigated which specific types of symbols most effectively fostered trust. In this breakdown, cultural symbols emerged as the most trust-inducing, with an average trust score slightly above 80%. Social symbols followed closely at 70%, while political symbols were associated with more moderate trust levels, comparable to no-symbol content, both hovering near 60%. These patterns indicate that cultural symbols may play a particularly vital role in reinforcing trust, likely because of their connection to shared heritage, national identity, and long-standing community values. Social symbols also appear effective in building trust, likely due to their emphasis on interpersonal bonds and collective belonging. In contrast, political symbols may be more polarizing or susceptible to partisan interpretation, thereby limiting their capacity to foster trust universally.

Together, these findings emphasize that not only does the presence of symbols enhance user trust in democratic discourse, but that the type and complexity of symbolic content also play a significant role. Cultural and social symbols appear to be especially powerful in promoting public confidence, while excessive symbolic complexity or political imagery alone may not always generate the strongest trust response.

6 Validation

To ensure the reliability of our findings, we employed two validation strategies: statistical significance testing and follower distribution analysis. The first approach used the Kruskal-Wallis H test to assess whether differences in emotion

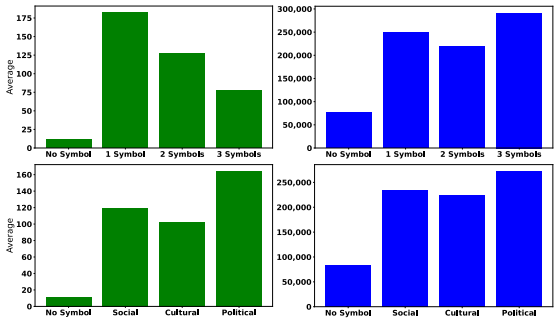

Fig. 5. Follower and Data Distribution for Different types (above-Left & Right) and Different quantities of Symbols (bottom-Left & Right)

and trust scores were significant across symbol categories and types. The results showed strong significance in all cases, with p-values of 2.96×10^{-19} (emotion by category), 1.01×10^{-14} (emotion by type), 3.56×10^{-11} (trust by category), and 7.82×10^{-15} (trust by type).

These outcomes confirm that both the number and type of symbolic elements in TikTok content significantly influence emotional and trust-related responses, validating our analysis.

We also performed controlled analysis of follower distribution, accounting for possible audience size biases. As shown in Figure 5, posts with a single and political symbol had the highest average follower counts. Posts with all three symbol types and political content also showed the greatest total follower reach, but since the engagement for the two symbols and social symbols was highest, this rejects the possibility of audience size bias, which may influence our findings.

Together, these results strengthen the credibility and generalizability of our findings, underscoring the role of symbolic communication in shaping political discourse on TikTok during Taiwan's 2024 election.

7 Conclusion & Multidisciplinary Contribution

This study examined how different symbols embedded in TikTok videos during Taiwan's 2024 presidential election influenced user engagement, emotional responses, and trust in democratic processes (Figure 6). By integrating symbolic interaction theory with computational analysis and large language models, we demonstrated that symbolic content significantly shapes digital political discourse—both behaviorally and affectively.

Our findings contribute to a range of disciplines. In communication and media studies, we highlight how short-form video platforms enable symbolic messaging that resonates emotionally and fosters civic engagement. In political science, the study reveals how symbolic content reinforces democratic trust and counters disinformation in electoral contexts. From a computational social science perspective, we offer scalable methods for analyzing symbolic meaning and affect in

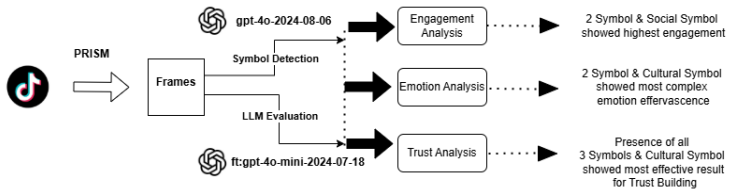

Fig. 6. Research Overview with results

visual media using LLMs. Additionally, insights from political psychology and cultural anthropology show how symbols activate trust and identity, shaping how users interpret and respond to political narratives.

By bridging theory across different domains, this research advances our understanding of how symbols function as powerful tools emotional mobilization, and trust-building in the evolving landscape of digital democracy.

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