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HUMOUR, PERSUASION, AND POLITICS:
Impact of Memes on X During the 2024 U.S. Presidential Election Campaign

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ABSTRACT

Memes have become a significant aspect of political communication on social media. These elements serve as a creative and humorous medium for expressing opinions and engaging in political discourse. The persuasive power of political memes lies in their ability to frame issues and incorporate rhetorical elements that can influence their virality and impact on social media audiences. This study analyses the engagement and sentiments conveyed by various memes posted on the social media platform X during the 2024 U.S. presidential election campaign.

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1. Introduction

Scholars of political communication have long looked to the United States as a source of inspiration for planning electoral campaign strategies. In the first half of the 20th century, specifically in the 1920s and 1940s, the field of Mass Communication Research was established there, an academic discipline concerned with analysing the growing importance of mass media (press, radio, cinema) in shaping society: understanding their impact on audiences was both necessary and urgent (Pooley, 2008). This, naturally, had applications in politics: its findings were highly valuable for planning successive electoral campaigns.

In the 1932 presidential election race between Franklin D. Roosevelt and Herbert Hoover, amidst the Great Depression, Roosevelt effectively leveraged the audience's fascination with a new communicative tool (radio) to reach American households and secure their votes (Craig, 2000; Lazarsfeld and Stanton, 1941; Levine, 2010).

Years later, J.F. Kennedy capitalized on his telegenic appeal to connect emotionally with the millions of American television viewers, defeating Richard Nixon in the 1960 election (Craig, 2013; Kraus, 2013; Schroeder, 2016; Soddu, 2012).

Social media played a pivotal role in Barack Obama's victories in the 2008 and 2012 presidential elections. The African-American leader harnessed the potential of Facebook, Twitter, and YouTube to interact directly with voters, raise funds, and disseminate his message. He has been regarded as the quintessential 'memecrat' for his adept use of memes in institutional and political communication (Cogburn and Espinoza-Vasquez, 2011; Kreiss, 2012; Dimitrova et al., 2014; Martínez-Rolán et al., 2016; Metzgar and Maruggi, 2009).

Donald Trump effectively utilized this same communicative context to connect directly with the public, largely bypassing traditional media. With a concise, impactful, emotional, and provocative communication style, creating viral content with straightforward narratives embedded in memes and videos, he secured the presidency in 2016 (Enli, 2017; Hendricks and Schill, 2017; Kreis, 2017; Otto, 2017).

In the 2024 elections, the communicative landscape of social media has become a well-defined and studied battleground in political communication strategies. As Marcos García (2018) notes, "political actors consider them an essential channel for delivering their messages and engaging more easily with their voters." Donald Trump and Kamala Harris employed markedly different strategies, but both recognized the efficacy of one format: the meme, particularly with the incorporation of new social media platforms relevant to politics, such as TikTok and Instagram.

While Harris opted for memes with videos optimized for these platforms, highlighting more personal and human aspects of her candidacy, Trump focused on dominating digital narratives and debates with a more aggressive and provocative approach to his memes. Moreover, as the contest hinged on a few key states, both relied on micro-segmentation enabled by big data to tailor their meme messages as effectively as possible.

It is evident that the shift from traditional politics to social media has given rise to new spaces, forms, and languages for political communication. Furthermore, in a context where the web is evolving towards a more visual format, political parties and leaders have begun incorporating various types of images into their digital strategies (Villar et al., 2023) to maximize their communicative impact and foster user interaction in their dissemination, facilitating their transformation into viral memes.

This shift in political communication planning is a response by campaign strategists to the changing informational habits of younger audiences. According to a report published by the Pew Research Center on 10 October 2024, nearly half (46%) of those under 30 prefer social media as a source of political information, compared to only 23% of those aged 30 to 49, and even lower percentages among those over 50 (Pew Research Center, 2024a). This trend underscores the growing impact of platforms such as Instagram, TikTok, and X (formerly Twitter) among younger audiences (Pew Research Center, 2024b), while older adults prefer television as their primary source.

In this context, memes have become a key resource in contemporary political communication strategies due to their ability to synthesize complex ideas into concise, visually appealing formats that enhance virality on social media (Shifman, 2014). They represent a new language through visual and simple content with significant communicative power (Martínez-Rolán et al., 2016). Beyond generating interaction, memes resonate emotionally with audiences, facilitating their dissemination among

younger voters, who are particularly receptive to these digital languages (Highfield, 2016). They are a creative tool that enhances the viral potential of conveying political beliefs, attitudes, and orientations (Ross and Rivers, 2017). Additionally, citizens can use them in real-time during political events without fear of censorship (Ross and Rivers, 2017). Some studies confirm how memes go viral, as users almost instantly consider to whom they might appeal and thus forward them (Lieberman, 2012, cited in Rodríguez, 2013). Researchers have highlighted that political memes can foster group identity among voters and contribute to affective polarization, that is, the increasing emotional distance between individuals with opposing views (Anderau and Barbarrusa, 2024; Huntington, 2023). Although memes rarely offer in-depth analysis, they can motivate young people to learn more about political issues or lower the barrier to entry for political discussions, making them more accessible (Ahmed and Masood, 2024). Ross and Rivers (2017)note that memes have the capacity to delegitimize a political candidate, serving to critique and mock candidates by focusing on controversial aspects of their campaigns However, it has also been pointed out that the educational impact of memes is limited compared to more traditional sources, such as journalistic articles, which could affect the quality of knowledge acquired (Dongqiang et al., 2020). This phenomenon not only redefines the forms of political communication but also poses new ethical and discursive challenges in a highly polarized environment dominated by algorithmic dynamics.

Regarding this format, memes have been the subject of considerable academic reflection for years. With the emergence of the first viral phenomena, the term 'meme' began to be used to describe any fragment of popular culture originating on the internet (Shifman, 2013). To understand the concept, without delving into its origins, it is useful to refer to the initial definition of a meme proposed by Richard Dawkins in 1976, in his work The Selfish Gene, where he describes it as "a unit of cultural transmission." While Dawkins' original definition is unrelated to the meme as understood today, its basic approach helps us grasp the current concept. A meme should not only be considered a humorous or critical expression towards a person or situation but also as a means of transmitting social knowledge or a shared sentiment in a visual, rapid, and easily disseminated manner (Carrasco et al., 2020).

More specifically, Coleman (2012) defined online memes as "viral images, videos, and slogans constantly modified by users, with a tendency to spread as quickly as the internet allows" (p. 109). Beyond humour, memes also have the capacity to structure arguments and communicate ideas (Anderau and Barbarrusa, 2024; Martínez, 2021; Rezeki et al., 2024). As Castaño (2013) notes, the themes of memes are diverse, ranging from trivial matters to critical social issues pertinent to a society at a specific moment. These contents constitute a form of expression and participation for online communities (Davison, 2012; Vickery, 2014), which thrive on platforms with high connectivity and shareability, facilitating their rapid consumption and propagation (García Huerta, 2014; Knobel and Lankshear, 2007). The ease with which they spread online (Danung and Attaway, 2008), their expressiveness, the humour they often contain, and their capacity for reinterpretation are factors that explain their success both academically and socially.

The meme phenomenon is further characterized by its contagious nature, amplified by its striking, satirical, humorous, or universal appeal (Chen, 2012; Hansen et al., 2011; Huntington, 2013). It is this ability to capture attention that allows memes to spread rapidly, achieving a virality that, as Delia Rodríguez emphasizes, has become "the only way to make one's voice heard in the global information noise" (Rodríguez, 2013). In this sense, virality and appropriation are two mutually influential realities: it is the community that imbues the meme with value by disseminating, creating, or replicating such content, adapting it to their context or communicative needs (Knobel and Lankshear, 2007; Vickery, 2014;). This practice of spreading contagious ideas is what Rodríguez terms "memecracy." According to various studies, the viralization of memes is partly achieved because consumers not only enjoy the content but also, almost immediately, consider with whom they could share it or who might enjoy it (Wong and Holyoak, 2021).

2. Objectives

Based on the foregoing, this study proposes the following objectives:

1. To analyse the configuration of the user and interaction network generated on the social media platform X by posts identified as memes during the 2024 U.S. presidential election campaign, identifying the network leaders and analysing their profiles.

2. To measure the level of engagement, polarity, subjectivity, favourability, and comment ratio of the posts based on the type of meme to determine whether significant differences exist between them.
3. To determine whether differences exist in the aforementioned dependent variables based on the format of the post, whether video, image, carousel, or text-only.
4. To identify potential significant correlations between engagement, polarity, and subjectivity in the published memes.

2.1. Methodology

To analyse the types of images included in each meme, the study draws on the work of Martínez-Rolán and Piñeiro-Otero (2016) concerning the use of images in the digital discourse of Spanish political parties on Twitter during the 2015 Spanish State of the Nation debate. Building on these authors' contributions, a typology of graphic memes was established, encompassing television screen captures (screen prints), compositions of multiple photos (photo collages), single photos, graphics, highly stereotyped text and image compositions (macro images), infographics, tables, and visualized text without images (visual text). Upon commencing the analysis, it became evident that many memes did not fit these categories, necessitating the expansion of the typology to include two new categories: video and GIF. This was informed by Coleman's definition of memes as "viral images, videos, and slogans constantly modified by users, with a tendency to spread as quickly as the internet allows" (Coleman, 2012:109). Additionally, GIFs were incorporated into the initial typology due to their prevalent presence on social media. The definition of a meme is thus understood as a dynamic concept (Rodríguez Rodríguez, 2022), and the analysis framework was adapted to reflect this.

Data collection was conducted using the NodeXL Pro software (Smith et al., 2009). To facilitate the data download, the most frequent hashtags related to the U.S. elections were identified on the social media platform X. The software was programmed to retrieve all messages and their respective interactions using the syntax #Harris2024 OR #KamalaHarris OR #VoteBlue OR #Election2024 OR #USAElections OR #Democrats OR #Republicans OR #Trump2024 OR #MAGA OR #Conservative OR #VoteBlueToSaveAmerica #meme. This ensured the capture of messages containing any of the campaign-related hashtags alongside the hashtag #meme. The collected messages and interactions were posted between 10 September and 5 November 2024, covering the election campaign period.

From the collected data, original posts (n=430) were selected and manually and individually analysed to categorize them within the pre-established categories. It was found that some posts, despite addressing the presidential elections and including the hashtag #meme, were not genuinely memes. Consequently, these posts were excluded from subsequent analysis, resulting in a final sample of 325 original posts.

For each post, the engagement or interaction rate was calculated as the sum of total interactions received divided by the number of impressions. Engagement refers to the level of interaction and active connection between users and the posted content, representing the degree of cognitive, emotional, and behavioural involvement of users with the platform. Additionally, the favourability index ((retweets + likes)/impressions) and the comment ratio ((replies + quotes)/impressions) were calculated to determine which posts generated greater agreement and which elicited more reactions in the form of written responses. A retweet or like is an indicator of interaction that generally reflects passive or low-effort engagement by the audience. These actions typically require minimal time and reflection, as they involve acceptance or dissemination of content without the need for personal elaboration.

In contrast, a reply or comment represents active and higher-intensity engagement. These actions require the user to dedicate time, formulate thoughts, and participate in a conversation, indicating a deeper level of cognitive and emotional involvement.

In a second step, the polarity and subjectivity of each post's message were calculated. This was achieved using the Python library TextBlob (Oliphant, 2007; Alemán Viteri, 2021), designed for natural language processing (NLP), which facilitates tasks such as sentiment analysis. This functionality relies on a lexical approach, using a predefined dictionary that classifies words as positive or negative. When analysing a text, TextBlob calculates two main metrics. First, polarity, which indicates the degree of positivity or negativity of the text, with values ranging from -1 (highly negative) to 1 (highly positive). Second, subjectivity, which measures the level of opinion present in the text, on a scale from 0 (objective) to 1 (highly subjective).

To determine these metrics, TextBlob breaks down the text into its lexical components and assigns scores based on its internal dictionary. These scores are then aggregated to provide an overall assessment of the text's sentiment. This approach enables an efficient and straightforward implementation of sentiment analysis in NLP applications.

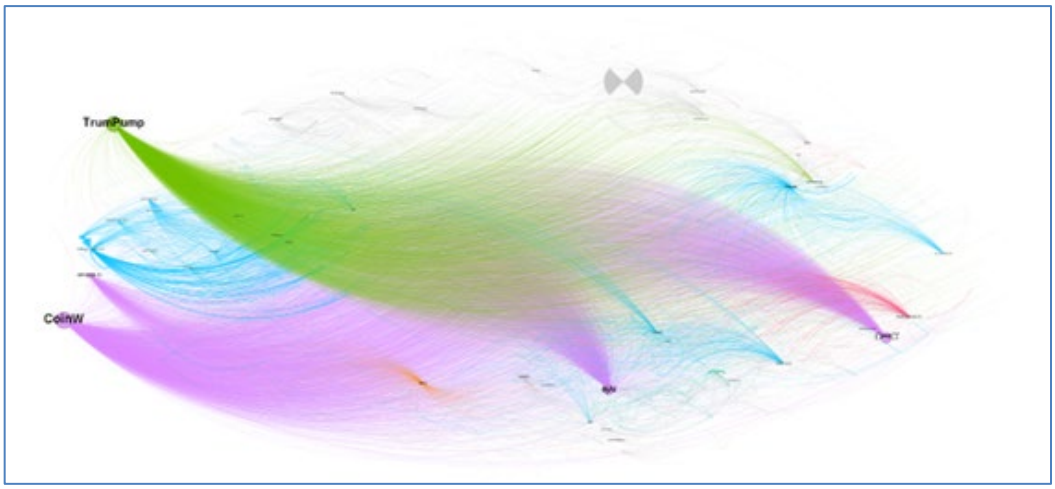
Once all the aforementioned indices were calculated for each original post, inferential statistical analysis was conducted to determine whether differences existed in the various indices based on the type of meme and the post format (video, carousel, image, GIF, or text-only). The SPSS software (Tobergte and Curtis, 2013) was used for these analyses. Kolmogorov-Smirnov normality tests (Massey, 1951) indicated a non-normal distribution for all variables, leading to the use of the non-parametric Kruskal-Wallis test (Ostertagová et al., 2014) to examine potential differences based on meme type or post format.

3. Analysis of Results

3.1. Description of the Network

The network of nodes comprising all users who posted content including the hashtag #meme during the U.S. presidential election campaign consisted of a total of 8,015 users who interacted 13,904 times, all uniquely with no duplicates. Nine types of interactions were recorded: 8,586 retweets, 3,905 mentions in retweets, 322 replies, 258 mentions in replies, 254 mentions, 430 original posts, 87 quotes, 58 mentions in quotes, and 4 mentions in replies to quotes. Of these interactions, 545 were self-loops (edges connecting a node to itself).

Figure 1. Representative network graph



Source(s): Own elaboration, 2025.

The reciprocity index between pairs of users (the proportion of mutual connections between two nodes, i.e., where both nodes link to each other) was 0.18%, and for interactions, it was 0.36%. A total of 465 components (subsets of nodes where there is at least one path between each pair of nodes, disconnected from the rest of the network) were identified, of which 275 consisted of a single user. The largest component comprised 2,406 users (30.02%), and the component with the most interactions contained 6,329 interactions (45.52%). The maximum geodesic distance, or network diameter (the longest shortest path between any pair of nodes in the network), was 14, with an average geodesic distance of 2.76. Finally, the network exhibited a density (the proportion of existing edges to the maximum possible number of edges in the network) of 0.021% and a modularity of 0.713363 (a measure of the quality of the network's partition into communities, comparing the density of edges within communities to that expected if connections were random).

3.2. Analysis of the Most Relevant Users

The most relevant users, based on the main centrality measures, did not explicitly position themselves regarding the election campaign, except for Elon Musk and TrumPump, who expressed support for Donald Trump. Accounts focused on topics such as cryptocurrencies or marketing stood out and did not appear to show a general interest in politics.

Table 1. Most relevant users in the network

Name	Description
Akande Akinyemi Abdulmujeeb $BUBBLE????	No description in the user account profile.
Amanda 💎	Reborn From @.AmandaPromose | Giveaway host 🎁 | Social Media Promoter 📲 | Crypto & Business | DM ME FOR PROMO 📩 - proof winner On #mandalegit #BTC
ayu	Collab/partnerships - DM or TG https://t.co/p6EOsKVoq5 | ayuminati | Jopo | Winners: #ayuproofs | Crypto Enthusiast | $EGG 🥚 | KnightSafe
CoinW	Smarter trading with the leading cryptocurrency exchange with 13M+ users - empowering traders, investors, and innovators worldwide.
David_Gonzales	🐻 - #ÅCannabis #MemeJuice - @MemeJuiceCo 💩 ☮ I teach people2 🧑‍🌾 #Sustainable #Regenerative #organic #Cannabis https://t.co/f7rYJGe4ij -
Dizz	Perma Bull
Donald J. Trump	45th President of the United States of Americaus
elia anggrek	Ada kadang pake wifi kadang data
izzy ⍰	♡ -digital marketer & web3 promoter. dm me for business. tg: https://t.co/Z9ntYjQXlC 📩 vouches: #izzywins #noizzy -˚ ꒰ᐢ. .ᐢ꒱
Roger 😨 😨	wish I could escape reality
SOLANA Network and BASE projects	$KINGT elections are coming soon best community CA: BGEc8h5Ueeig9YuJa8ahBRq7gndv8NqQy4rHUxdspump
TrumPump	us Official Account for #TrumPump Project us CA: 0x1b05a5eB250DFc419288e20FF1224faa27F73137 BUY #TrumPump with $ETH on https://t.co/1UHIVsk6Uk

Source: Own elaboration, 2025.

Analysis of the main centrality measures of users revealed that the most relevant user in both absolute and relative terms within the network was CoinW, while the user connecting the most other users around them was TrumPump, and the user mentioning others most frequently was SOLANA Network and BASE projects. Of the four centrality measures analysed, three indicated that the most relevant accounts did not have a pronounced political profile but were instead focused on the cryptocurrency sector. Notably, the account of Donald Trump ranked among the top five for the intermediation index.

Table 2. Users with the highest centrality indexes

Name	In-Degree	Name	Eigenvector Centrality	Name	Betweenness Centrality	Name	Out-Degree
CoinW	2.300	CoinW	0,45	TrumPump	5.771.517	SOLANA Network and BASE projects	74
TrumPump	2.255	ayu	0,34	CoinW	2.866.664,68	Akande Akinyemi Abdulmujeeb $BUBBLE????	55
ayu	1.668	izzyy ᴗ̈	0,34	ayu	1.183.622	Dizz	40
izzy ⍰	1.648	Amanda 💎	0,15	izzy ᴗ̈	1.149.033	David_Gonzales	31
Amanda 💎	693	elia anggrek	0,02	Donald J. Trump	1.117.869,76	Roger 😨 😨	30

Source(s): Own elaboration, 2025.

3.3. Differences Based on Meme Type

Statistical tests revealed significant differences in engagement based on the type of meme ($K(9)=20.88$; $p<0.05$). Additionally, significant differences were found in favourability ($K(9)=18.06$; $p<0.05$). However, no significant differences were observed in polarity ($K(9)=2.58$; $p=0.97$), subjectivity ($K(9)=6.29$; $p=0.71$), or comment ratio ($K(9)=13$; $p=0.16$).

While GIFs generated the highest engagement (M=11.41%; SD=13.31%), photo collages were the least engaging (M=1.31%). When examining favourability, the same pattern persisted, with no changes in the categories scoring highest or lowest. Again, GIFs received the most positive interactions (M=9.78%; SD=12.21%), while photo collages received the least (M=1.09%; SD=1.33%).

Table 3. Frequencies and averages of the main variables analysed by type of meme

Type of meme	f_i	F_i	Engagement	Favourability	Comment ratio	Polarity	Subjectivity
Gif	10	3,08%	11,41%	9,78%	1,63%	0,17	0,29
Graphic	49	15,08%	4,85%	4,03%	0,82%	0,19	0,23
Infographic	1	0,31%	1,56%	1,56%	0,00%	0,00	0,00
Macro image	81	24,92%	3,54%	2,90%	0,64%	0,16	0,20
Photo collage	22	6,77%	1,31%	1,09%	0,23%	0,24	0,30
Screen print	1	0,31%	1,61%	1,61%	0,00%	0,19	0,60
Single photo	25	7,69%	7,52%	6,31%	1,21%	0,20	0,30
Table	7	2,15%	3,61%	2,96%	0,64%	0,19	0,23
Video	89	27,38%	2,25%	1,80%	0,45%	0,18	0,25
Visual text	40	12,31%	4,28%	3,42%	0,86%	0,19	0,25
Total	**325**	**100,00%**	**3,86%**	**3,18%**	**0,69%**	**0,18**	**0,24**

Source(s): Own elaboration, 2025.

3.4. Differences Based on Format

No significant differences were found in any of the dependent variables under study.

Table 4. Frequencies and averages of the main variables analysed by publication format

Type of meme	f_i	F_i	Engagement	Favourability	Comment ratio	Polarity	Subjectivity
Carousel	13	4,00%	1,91%	1,48%	0,44%	0,24	0,25
Gif	7	2,15%	11,13%	10,09%	1,04%	0,22	0,40
Image	174	53,54%	4,34%	3,60%	0,73%	0,17	0,24
No	41	12,62%	4,06%	3,28%	0,79%	0,20	0,24
video	90	27,69%	2,57%	2,02%	0,56%	0,18	0,25
Grand total	**325**	**100,00%**	**3,86%**	**3,18%**	**0,69%**	**0,18**	**0,24**

Source(s): Own elaboration, 2025.

3.5. Correlation Between Engagement, Polarity and Subjectivity

The Spearman correlation test did not find engagement to be dependent on either polarity or subjectivity. However, a significant positive correlation of moderate strength was identified ($Rho=0.76$; $p<0.001$) between polarity and subjectivity, indicating that the more positive a meme is, the more subjective it tends to be.

4. Discussion and Conclusions

The analysis of the network of users who interacted with the hashtag #meme during the U.S. presidential election campaign reveals fundamental patterns in the dissemination of content on social media.

Comprising 8,015 users and 13,904 interactions, the network exhibits a dispersed structure with a low reciprocity index, suggesting predominantly unidirectional connectivity in the spread of information.

The centrality analysis indicates that the most influential users are not directly linked to political debate but are associated with sectors such as cryptocurrencies and digital marketing. However, the presence of Donald Trump among the top five accounts with the highest intermediation index stands out, suggesting that his profile serves as a key node in the propagation of information within the network. The user CoinW achieved the highest interaction index, being the most mentioned by others who, in turn, are highly mentioned, making it the most relevant user.

Regarding meme types, the results show significant differences in engagement and favourability based on the type of content shared, but not in polarity, subjectivity, or comment-based interaction. GIFs, due to their high effectiveness in engagement and favourability, appear to be the meme format that most effectively captures audience attention and generates positive reactions. This may be attributed to the fact that easily and quickly understood images garner greater acceptance and interaction. The low participation elicited by videos suggests that, as they require longer viewing times, they are not the optimal format for achieving virality, interaction, and engagement.

With respect to post formats, no significant differences were found in engagement, favourability, polarity, or subjectivity, indicating that the mode of content presentation does not substantially influence user interaction.

The findings of this study provide evidence on the dynamics of interaction on social media during high-profile political events, such as elections and their associated television debates, and the role memes play in digital political communication.

Concerning the network structure, the low reciprocity observed in the study indicates that the conversation surrounding memes is not bidirectional but is dominated by a few central nodes that drive content dissemination.

Regarding the most relevant users, although the analysis is situated in an electoral context, the most influential actors in the network are primarily linked to the promotion of cryptocurrencies and digital marketing, suggesting a strategic use of viral content, in this case memes, for commercial purposes.

In terms of meme type, GIFs were the most effective format for engagement and favourability, while videos, despite their frequency, did not generate significant participation. This result underscores the importance of visual, rather than audiovisual, formats in content viralization. As no significant differences in user interaction were found when analysing post formats, it can be inferred that the content of the meme is more important than its presentation format. However, the study suggests that the more positive a meme is, the more subjective it tends to be.

In summary, the results highlight the need for a deeper understanding of how specific formats and types of content can enhance public participation on social media, as well as the influence of non-political actors in the dissemination of information during major media events, which may be decisive in shaping voting decisions.

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