Memes vs. Machines

Comparison of AI-generated Images vs. Traditional Memes in Right-Wing Social Media Discourse

Author: Alex Petruk

Keywords: Digital Political Communication, Generative AI, Meme Culture, Propaganda, Right-Wing Extremism Online

Abstract:

This paper examines the use of traditional internet memes and AI-generated images in the dissemination of right-wing ideologies on social media, focusing on their prevalence and engagement. Data was collected from prominent right-wing accounts and meme-centric profiles on Twitter/X during the two months preceding the 2024 U.S. presidential election. Prevalence, measured by the volume of posts, demonstrated that traditional memes dominate right-wing discourse, accounting for 77% of visual content shared by large accounts and 90% by smaller ones. Engagement metrics, including weighted interaction and virality scores, revealed that AI-generated images, while less frequent, achieved significantly higher engagement levels, particularly in large accounts. These findings suggest that memes serve as versatile and broadly appealing tools for ideological dissemination, while AI-generated images are more impactful in targeted, high-engagement contexts. The study highlights the complementary roles of these formats in right-wing messaging strategies and raises critical questions about the evolving implications of generative AI for political propaganda, emphasizing the need for future research into its influence across digital platforms.

1. Introduction

"In Springfield, they're eating the dogs—They're eating the cats."[1] This sensational claim, made by then-presidential nominee, Donald Trump, during a televised debate with Vice President Kamala Harris on September 10, 2024, quickly became a cultural flashpoint in that year's US presidential campaign. Though immediately debunked, the claim was an instant hit with right-wing audiences and generated an incredible amount of discourse on social media. Before the debate ended, right-wing Twitter/X accounts were alight with images produced by generative artificial intelligence (AI) which amplified the theme: immigrants eating pets and Trump cast as the pets' saviour.

The right-wing's strategic use of social media, particularly through visual elements like "memes," has been widely studied, with much attention paid to their reliance on humour and cultural references to spread ideology. The rise of generative AI, however, marks a significant shift in this dynamic. The proliferation of accessible text-to-image tools has enabled the creation of AI-generated images on a massive scale. This phenomenon raises an important question: how do generative AI images differ from traditional internet memes in conveying right-wing ideologies?

This paper begins by looking at traditional memes and generative AI models, with a brief focus on its harmful potential for social media manipulation, followed by an exploration of how right-wing actors use social media to spread ideological messages. The methodology section explains the social media platform and account selection processes, as well as the engagement metrics used for analysis. The findings section compares engagement patterns across memes and AI-generated images, revealing different strengths and weaknesses. Finally, the discussion considers the broader implications of these findings for the online dissemination of right-wing ideology, an overview of this study's limitations, and concludes with suggestions for further research into the use of generative AI for ideological spread.

2. Literature Review

2.1 Internet Memes:

The term *meme* was originally coined by biologist Richard Dawkins in 1976 to describe the way humans "pass on cultural information and ideas between individuals and generations."[2] Internet memes, however, represent a relatively recent phenomenon that builds on this concept in a digital context. Scholars define internet memes in various ways, often emphasizing their humour and visual appeal. For example, they are described as "digital items that use humor, by conveying a picture or illustration with simple captions."[3] They are a form of "vernacular online communication" or critique which amplifies ordinary voices through accessible (visual) and relatable (humorous) formats.[4] Internet memes are effective due to their brevity, humour, and emotional resonance. Lyndon Way explains memes are "short, snappy, entertaining—express a particular point of view through humour."[5] They encapsulate complex ideas concisely, all while creating an emotional impact. Way summarizes memes as "manipulated texts produced and distributed for the purpose of satire, parody, critique, —to posit an argument, visually, in order to commence, extend, counter, or influence discourse."[6] In this sense, memes are inherently participatory — they are digital items that are "remixed, altered, and produced or co-produced by multiple users."[7]

[1] Riley Hoffman, "READ: Harris-Trump Presidential Debate Transcript," *ABC News*, September 10, 2024. https://abcnews.go.com/Politics/harris-trump-presidential-debate-transcript/story?id=113560542.
[2] Lyndon C.S. Way, "Trump, Memes and the Alt-Right: Emotive and Affective Criticism and Praise," *Russian Journal of Linguistics* 25, no. 3 (December 15, 2021): 791.
[3] Karoline Ihlebæk et al., "What Is the Relationship between the Far Right and the Media?" *C-REX - Centre for Research on Extremism* (blog), September 7, 2020.
[4] Katharina Lobinger et al., "Pepe – Just a Funny Frog? A Visual Meme Caught Between Innocent Humor, Far-Right Ideology, and Fandom." In *Perspectives on Populism and the Media*, ed. Benjamin Krämer and Christina Holtz-Bacha. (Nomos Verlagsgesellschaft mbH & Co. KG, 2020), 339.
[5] Way, "Trump, Memes and the Alt-Right," 791.
[6] Way, "Trump, Memes and the Alt-Right," 791.
[7] Lobinger et al., "Pepe – Just a Funny Frog?," 338–39.

Internet meme culture, which includes viewing, creating, sharing, and commenting on memes, has become one of the most important forms of political participation and activism, used to criticize, ridicule, or *troll*[8] authority figures.[9] Memes, with their ability to easily bring mainstream media topics to social media users, have the power to influence the way viewers perceive other people and the world around them.[10] As a result, internet memes have become a way to understand and challenge concepts, identities, and claims made by various political groups.[11] The creation, viewing and sharing of memes has become a ubiquitous, near paramount part of modern politics and activism.[12]

A dominant characteristic of memes is that they don't communicate through logically structured arguments. Rather, they use short quips and images to engage and entertain viewers through emotional appeal.[13] This type of communication simplifies facts and opinions, reducing them to bite-sized, affective messages;[14] additionally, memes often "strategically mask bigoted and problematic arguments."[15] By leveraging "affective and emotional discourses of racism, nationalism, and power," memes exploit the visual form to engage with and influence their audience.[16] This intertextuality (the links that are created between the single element and the broader memetic narrative) explains why memes are powerful tools for expressing hate on the web.[17] Through these intertextual references,[18] users can perform their belonging to specific communities and values, creating a sense of identity through shared memes (i.e., proximation illusion).[19] This further illustrates the role of social media in enabling selective exposure, where users are more likely to encounter content that resonates with their existing beliefs and emotions.

Internet humour further intensifies the impact of these messages and helps to normalize harmful stereotypes. When racial or violent content is presented humorously, it becomes easier to mask and make acceptable.[20] Memes achieve this by employing visual symbols which, much like language, gain meaning through usage and context. Hate symbols are particularly effective because they convey "meaning, intent, and significance in a compact, immediately recognizable form," making them more potent than words alone.[21] This masking of ideological claims with humour allows right-wing ideologies to remain accessible and even attractive to a wider audience. As a result, memes serve as a vehicle for aestheticizing racism, blending seemingly innocent pop-culture references with extremist views.[22] Far-right actors have been at the forefront of this process, using memes to mainstream extreme content through humour and coded language.[23] Social media platforms, for their part, have given these actors considerable visibility, helping normalize their beliefs and spreading them further.[24] This highlights the critical role of memes in right-wing online strategy, where the use of visual elements and humour makes hateful content appear more palatable and circumvents traditional barriers to hate speech.

2.2 Generative AI:

Generative AI is a broad term that refers to artificial intelligence systems capable of creating various types of media in response to user-generated prompts. It is an advanced type of "machine learning", with Large Language Models (LLMs) and Text-to-Image (TTI) models being the most developed

[8] Internet "*trolling*" is a term that refers to "any form of abuse carried out online for the pleasure of the person causing the abuse or the audience to which they are trying to appeal." (Lobinger et al. 2020, 343-344)
[9] Way, "Trump, Memes and the Alt-Right," 789, 791.
[10] Way, "Trump, Memes and the Alt-Right," 791.
[11] Way, "Trump, Memes and the Alt-Right," 792.
[12] Way, "Trump, Memes and the Alt-Right," 791.
[13] Way, "Trump, Memes and the Alt-Right," 789.
[14] Way, "Trump, Memes and the Alt-Right," 792.
[15] Lobinger et al., "Pepe – Just a Funny Frog?," 347.
[16] Way, "Trump, Memes and the Alt-Right," 789.
[17] Lobinger et al., "Pepe – Just a Funny Frog?," 339.
[18] "To be identified as part of the same meme, the single elements need to share recognizable common features or aesthetic commonalities, which can be certain visual style, a recurring motif or a topic expressed in similar manners or with similar keywords." (Lobinger, et al. 2020, 339)
[19] Lobinger et al., "Pepe – Just a Funny Frog?," 339.
[20] Lobinger et al., "Pepe – Just a Funny Frog?," 339.
[21] Lobinger et al., "Pepe – Just a Funny Frog?," 340.
[22] Lobinger et al., "Pepe – Just a Funny Frog?," 341.
[23] Ihlebæk et al., "What Is the Relationship."
[24] Ihlebæk et al., "What Is the Relationship."

and widely used types.[25] LLMs function by analyzing patterns in human language and predicting the most probable next word in a sequence. This allows them to generate contextually appropriate and human-like responses, whether answering questions or engaging in conversation, one word at a time.[26] Meanwhile, TTI models take a different tack. These systems are trained on massive datasets of labeled images, which they encode into numerical representations in a multidimensional latent *space*. By simulating the process of adding random noise to an image and then reversing it, these models can start with a text prompt, generate a random visual structure, and iteratively refine it into a synthetic image that aligns with the given prompt.[27] The final result is often a high-quality, photorealistic image that can be difficult to distinguish from genuine photographs. An important distinction to keep in mind throughout the remainder of this paper is that memes are nuanced, subtle, and interpretive; AI-images, on the other hand, are an exact representation of a user-generated text prompt. This means the person creating a racist, violent, or hateful AI image has to craft a very specific and detailed text-prompt to achieve the final result.

The evolution of content generation technologies can be thought of in three distinct generations, each marking a significant step forward in the sophistication of digital manipulation. The first generation, referred to as "crudefakes," relied on rudimentary techniques to create false or misleading content, often lacking in realism or credibility.[28] The second generation, characterized by the emergence of bots with more human-like features, improved the ability to spread disinformation by automating content delivery and mimicking authentic interactions online.[29] The current third generation uses generative AI to enhance both the quality of content and the plausibility of its messengers. This iteration combines photorealistic visuals, deepfake videos, and convincingly human-like communication to create and disseminate disinformation at an unprecedented scale.[30] Generative AI blurs the line between authentic and synthetic content, challenging human and machine-based detection systems.

Generative AI represents a technological leap that transforms social media manipulation by addressing key limitations of previous approaches. Unlike earlier methods, which required extensive human labour and were constrained by cost and scalability, generative AI enables the production of authentic-looking content at a fraction of the effort.[31] This includes not only realistic images and videos, but also the ability to create plausible *messengers*, making tactics like astroturfing—coordinated efforts to create the illusion of grassroots support—more convincing than ever.[32] Moreover, generative AI supports large-scale social media manipulation campaigns by combining high-quality content with *resonant* messaging and human-like interactions.[33] The simplicity and adaptability of generative AI enables a variety of actors to use these tools for social media manipulation, including "technically sophisticated nonstate actors," both domestic and foreign.[34] Although detection technologies continue to evolve, it's questionable whether they will keep pace with the evolution and improvement of generative AI itself.[35]

The key takeaway from the previous two sections is that memes, particularly when used as hate symbols, rely on their ability to convey meaning, intent, and significance in a compact and immediately recognizable form. Their power lies in their ambiguity and emotional resonance; the visual elements of memes are difficult to articulate verbally, allowing ideological claims, hateful messages, and racism to be softened or masked when paired with humour or pop-culture references. This ability to obscure harmful intent while

[25] William Marcellino et al., "The Rise of Generative AI and the Coming Era of Social Media Manipulation 3.0: Next-Generation Chinese Astroturfing and Coping with Ubiquitous AI." *RAND Corporation*, September 7, 2023, 5.
[26] Marcellino et al., "The Rise of Generative AI," 6.
[27] Marcellino et al., "The Rise of Generative AI," 6-7.
[28] Marcellino et al., "The Rise of Generative AI," 3.
[29] Marcellino et al., "The Rise of Generative AI," 3.
[30] Marcellino et al., "The Rise of Generative AI," 4.
[31] Marcellino et al., "The Rise of Generative AI," 4-5.
[32] Marcellino et al., "The Rise of Generative AI," 1.
[33] Marcellino et al., "The Rise of Generative AI," 9.
[34] Marcellino et al., "The Rise of Generative AI," 2.
[35] Marcellino et al., "The Rise of Generative AI," 5.

maintaining widespread appeal makes memes uniquely effective as tools for mainstreaming extremist ideas. By contrast, generative AI does not operate within this framework of subtlety and intertextuality. Instead, it creates highly realistic images that reflect precisely what the user specifies. While AI images may be humorous, they lack the ambiguity, seemingly innocent aesthetics, and pop-culture references that make traditional memes so effective as instruments of ideological spread.

2.3 The Right-Wing on Social Media:

Today's social media landscape is shaped by what scholars describe as *scroll culture*, a phenomenon in which users are guided by their thumbs: skimming, reading, liking, and commenting on a continuous flow of content that entertains and informs.[36] Within this framework, several key factors help explain how social media facilitates ideological dissemination. One such factor is the proximation illusion, whereby "virtual communities recreate physical communities via personal identification among its members."[37] In this context, individuals can develop a strong sense of identification and belonging toward online groups, just as with real-life groups.[38] Another significant concept is "emotional contagion:" the transfer of emotional states between individuals. Research has long established that emotions, both positive and negative, can spread without conscious awareness. This is particularly relevant to the study of extremism, as experimental evidence now demonstrates that this process can occur on a massive scale via social networks,[39] and it is well documented that what we experience and feel online can impact how we feel and act offline.[40]

Selective exposure to political information, another critical feature of social media, is a process that isolates users from alternative perspectives and leads to escalating political polarization.[41] On most social media platforms, the news feed serves as the primary mechanism by which users see content shared by their friends; however, this content is not presented in its entirety. Because the volume of content produced and shared is far greater than could reasonably appear on a newsfeed, posts must be filtered into something manageable.[42] These filtering decisions are driven by ranking algorithms, which social media providers program to show viewers content most relevant and engaging to them.[43] While such algorithms are ostensibly designed to enhance user experience, they often reinforce echo chambers, prioritizing content that aligns with users' prior engagement and pre-existing beliefs.

Why are these concepts important? They form the foundation for understanding how right-wing actors have leveraged social media to spread their ideologies to global audiences. Historically, individuals seeking right-wing discourse had to actively search for it in online discussion groups, bulletin boards, or forums, such as *Stormfront*: a white supremacist website founded by Don Black in 1995, that became a hub for extremist discussions and community-building.[44] These early online platforms had limited reach and presence,[45] in marked contrast to modern social media which has largely removed traditional barriers to disseminating harmful content; fringe political actors now have the unprecedented ability to popularize their extreme views to mainstream audiences.[46] The visual elements of these platforms have, therefore, become strategic tools in the right-wing playbook. While "ideologically driven websites consist

[36] Way, "Trump, Memes and the Alt-Right," 790.
[37] Julián Castro-Rea, "My Girlfriend Became Neo-Nazi: The Right's Presence and Activity in the Internet." *Berkeley Center for Right-Wing Studies Working Paper Series*. (UC Berkeley, 2019): 2.
[38] See also: *Social Identity Theory* in Kalin and Sambanis, "How to Think About Social Identity" (2018).
[39] Adam D. I. Kramer et al., "Experimental Evidence of Massive-Scale Emotional Contagion through Social Networks." *Proceedings of the National Academy of Sciences of the United States of America* 111, no. 24 (June 17, 2014): 8788.
[40] Kramer et al., "Experimental Evidence," 8790.
[41] Castro-Rea, "My Girlfriend Became Neo-Nazi," 5–6.
[42] Kramer et al., "Experimental Evidence," 8788.
[43] Kramer et al., "Experimental Evidence," 8788.
[44] Lorraine Bowman-Grieve, "Exploring 'Stormfront': A Virtual Community of the Radical Right," *Studies in Conflict & Terrorism* 32, no. 11 (October 30, 2009): 996–97.
[45] Prashanth Bhat and Ofra Klein, "Covert Hate Speech: White Nationalists and Dog Whistle Communication on Twitter," In *Twitter, the Public Sphere, and the Chaos of Online Deliberation*, eds. Gwen Bouvier and Judith E. Rosenbaum. (Palgrave Macmillan, 2020), 151.
[46] Castro-Rea, "My Girlfriend Became Neo-Nazi," 5.

of a variety of textual, visual, and participatory elements,"[47] scholars argue that "the visual form is increasingly used for strategically masking bigoted and problematic arguments and messages."[48] This "vagueness of the visual mode" provides an advantage, as it allows for the creation of images, memes, and symbols that subtly convey extremist ideas while masking their intent.[49] By using discretemeans such as euphemisms, coded and multivocal[50] language, or images, ideologically-motivated groups seek to repackage their ideas in ways designed to appear less extreme and more palatable to a broader audience.[51] Social media features like retweets, shares, likes, and hashtags further amplify these messages, creating an enabling environment for right-wing groups to distribute their message outside of their immediate ororiginal network.[52]

Social media providers use automated moderation tools in an effort to curb the spread of harmful content. In response, ideologically motivated actors have adapted their behaviour to evade detection, often relying on deliberate and strategic ambiguity. This approach ensures that "supporters can decode the message in a radical way, but this interpretation can also be denied" if challenged.[53] To achieve this, these groups develop coded languages, cultures, and symbols designed to circumvent censorship.[54] A key tactic in this adaptation is the use of implicit hate speech, including dog whistles, coded language, humorous hate speech, and implicit dehumanization. Such methods spread "hateful messages using subtle expressions and complex contextual semantic relationships instead of explicit abusive words."[55] Furthermore, these groups continuously reinvent and appropriate symbols to prevent them from becoming too recognizable to the general public as coded hate speech.[56] This constant evolution not only sustains their ability to disseminate ideologies but also helps them maintain cultural and symbolic relevance within their social networks.

The final set of ideas to consider before delving deeper involves the ideologies of the groups themselves. Movements like White supremacists, the Alt-Right, the New-Right, and right-wing populists base their worldviews on the conception of 'the people' as a "culturally, ethnically, racially, and/or religiously homogenous community which is to be protected from hostile groups."[57] This perspective positions 'the people' in opposition to perceived enemies, specifically immigrants, minorities, or other groups seen as threatening. Thus, their messaging is framed as a defensive effort against these perceived threats. At the same time, these groups often frame themselves as champions of free speech (which they believe is under siege), arguing that "exaggerated political correctness" and censorship of right-wing discourses by mainstream media, politicians, social media platforms, and other elite institutions have stifled their ability to express their views openly.[58] In response, their use of visual elements, combined with strategies of ambiguity and coded language, becomes more than a communication tool; it is reimagined as an act of resistance or symbolic defiance against a system they perceive as oppressive.[59]

2.4 Existing Gaps:

So far, this paper has established the main differences between traditional memes and AI-generated images, as well as the ways in which they're used by right-wing groups to spread ideological messages through social media. It's important to analyze whether the

[47] Ihlebæk, Figenschou, and Haanshuus, "What Is the Relationship between the Far Right and the Media?"
[48] Lobinger et al., "Pepe – Just a Funny Frog?," 347.
[49] Lobinger et al., "Pepe – Just a Funny Frog?," 347.
[50] Multivocal Communication (aka dog whistle): "...refers to the use of words, phrases, and terminology that mean one thing to the public at large, but carry an additional, implicit meaning only recognized by a specific subset of the audience." (Bhat & Klein 2020, 153)
[51] Bhat and Klein, "Covert Hate Speech," 165.
[52] Bhat and Klein, "Covert Hate Speech," 166.
[53] Lobinger et al., "Pepe – Just a Funny Frog?," 343; Marten Risius et al., "'Substitution': Extremists' New Form of Implicit Hate Speech to Avoid Detection," *GNET*, (June 24, 2024).
[54] Bhat and Klein, "Covert Hate Speech," 152.
[55] Bhat and Klein, "Covert Hate Speech," 166.
[56] Lobinger et al., "Pepe – Just a Funny Frog?," 342.
[57] Lobinger et al., "Pepe – Just a Funny Frog?," 342.
[58] Lobinger et al., "Pepe – Just a Funny Frog?," 342.
[59] Alexis Benveniste, "The Meaning and History of Memes," *The New York Times* (January 26, 2022).

Illustration by Sophia Grace Foder

reception of memes was changed with the introduction of generative AI. There appears to be a research gap in the comparison of traditional memes and AI-generated images vis-à-vis their effectiveness – a concept this paper operationalizes using two key metrics: prevalence and engagement. Prevalence refers to the volume or frequency of content shared across social media platforms, providing insight into how extensively a particular format is used in ideological messaging. Engagement, on the other hand, measures the level of interaction these visuals generate among users (such as likes, comments, shares, or other reactions.) Together, these metrics allow for a comprehensive assessment of how well each medium spreads its intended messages and resonates with audiences.

3. Methodology

This research faced several challenges in the data-gathering stage, particularly regarding access to social media analytics. Free, publicly available analytics platforms such as Meta's CrowdTangle were discontinued (e.g., CrowdTangle was shuttered on August 14, 2024), while others, like Twitter/X's internal analytics, were hidden behind paywalls. Many commercial software tools are designed for analyzing personal accounts and require costly subscriptions, which were beyond the scope of this study. Because of these circumstances, adjustments were made and certain limitations had to be accepted. Twitter/X was selected as the social media platform for analysis for two primary reasons: its popularity among right-wing actors and the availability of basic engagement metrics such as comments, retweets, likes, and number of views.

3.1 Selection of User Accounts:

Accounts were chosen based on the following criteria: they had over one million followers, were commonly associated with right-wing discourse in the United States, and were not affiliated with sitting politicians. Using a fresh incognito Chrome browser and a brand-new Twitter/X account, X's own recommendation algorithm was used to select user accounts as they were suggested by the platform (provided they met the above criteria). Beginning with the highly popular account of Donald Trump Jr (@DonaldJTrumpJr) who had 12.5M followers, this method of selection yielded the following accounts for analysis (in no particular order):

CatturdTM (@catturd2) – 3.5M
Tomi Lahren (@TomiLahren) – 2.6M
Dinesh D'Souza (@DineshDSouza) – 4.4M
Jack Posobiec (@JackPosobiec) – 2.8M
Tim Pool (@TimCast) – 2.2M
Ben Shapiro (@benshapiro) – 7.1M
Candace Owens (@RealCandaceO) – 5.8M
Breitbart News (@BreitbartNews) – 2.2M
Tucker Carlson (@TuckerCarlson) – 14.2M
Andrew Tate (@Cobratate) – 10.1M
James Woods (@RealJamesWoods) – 4.2M
Vivek Ramaswamy (@VivekGRamaswamy) – 2.7M
Kellyanne Conway (@KellyannePolls) – 3.5M
KimDotCom (@KimDotCom) – 1.7M
Zerohedge (@zerohedge) – 1.9M
Alex Jones (@RealAlexJones) – 2.9M

Initial observations when gathering data from these accounts showed their use of memes or AI-images was quite limited. Therefore, to ensure a richer dataset, the scope was expanded and an additional search was conducted for 'meme-centric' accounts. The same algorithmic recommendation process was used in the selection, this time starting with LibsofTikTok (@libsoftiktok) with its 3.6M followers and End Wokeness (@endwokeness) with 3.1M. Given the rich amount of data available from meme-specific accounts, the selection parameters were modified to capture right-wing, meme-specific accounts of medium size (between 400,000 and 900,000 followers). The following smaller-sized accounts were recommended by Twitter/X and analyzed in this research:

End Wokeness (@endwokeness) – 3.1M
Mostly Peaceful Memes (@MostlyPeaceful) – 461.7K
The Right to Bear Memes (@grandoldmemes) – 604.9K
Declaration of Memes (@libertycappy) – 845K

3.2 Data Collection:

Without the aid of automated analytics software, the scope was narrowed to focus specifically on the period of time between September 1st and October 30th, 2024—the two months before the US Presidential Election. Using Twitter/X's search function, each social media account in this study was queried using the following two prompts:

> (from: name) since:2024-09-01 until:2024-09-30 filter:media
> (from: name) since: 2024-10-01 until: 2024-10-30 filter:media

The data was gathered over a period of four days, between October 30 and November 2, 2024. Only static images, including memes and AI-generated images, were included. Videos, GIFs, and images in which users "memed" themselves (inserted their own likeness for promotional purposes) were excluded.

3.3 Defining Memes and Identifying AI-Generated Images

Memes were identified for inclusion in these datasets by using simplified criteria drawn from *The New York Times*:

- Memes and their meanings are constructed by multiple users in a social context;
- Memes are pieces of media that are "repurposed to deliver a cultural, social or political expression, mainly through humour";
- Pop-culture: memes are basically editorial cartoons for the internet age;
- The power of a meme lies in its transmissibility and "unique knack for being cross-cultural";
- Memes are shareable by nature – their format catches one's eye and may be read and understood in seconds; and

- "Memes can be quite exclusive," as only people who are familiar with their origin will understand them.[60]

All AI-generated images which appeared on selected user accounts within the search parameters were selected; images not easily perceived as AI-generated were verified via an online AI image detector.[61]

3.4 Recorded Metrics

When compiling the dataset, the following data-points were recorded:

- Engagement metrics: number of comments, retweets, likes, and impressions (number of views);
- Posting date; and
- Brief description of the meme/AI-image.

Additionally, the following derived metrics were calculated and tabulated as follows:

Total interactions	$comments + retweets + likes$
Weighted Engagement Score[62]	$\left(\frac{comments+retweets}{views}\right) * \log log\,(likes)$
Weighted Virality Score[63]	$\frac{comments+retweets}{likes+views}$

3.5 Data Segmentation

Once data collection was complete, the number of Twitter/X posts in the dataset (n= 1,013) was divided into two groups for comparative analysis:

- Dataset 1: large accounts (>1M followers); and
- Dataset 2: smaller accounts (400K – 900K followers).

[60] Is It AI?, "AI-Generated Image Detector."
[61] Is It AI?, "AI-Generated Image Detector."
[62] A metric that emphasizes interaction intensity by combining user comments and retweets relative to the number of views, further scaled logarithmically by the volume of likes. This score highlights engagement beyond passive likes, focusing on active participation such as sharing and commenting.
[63] A measure of a post's shareability, calculated as the ratio of comments and retweets to the combined total of likes and views. This score underscores the extent to which a post inspires audience action compared to passive impressions.

4. Comparative Analysis

This section compares the differences in engagement between traditional memes and AI-generated images in the collected datasets. Understanding how traditional memes and AI-generated images engage audiences offers insight into the mechanisms through which far-right ideologies are disseminated and amplified on social media. It should be noted that many of the large accounts did not post many memes or AI-images (if at all). Some, such as Tucker Carlson and Ben Shapiro preferring to post video clips linking to their primary venture (e.g., YouTube channel or website). Some accounts, such as Alex Jones, relied heavily on AI-generated images in their video clips; however, those did not meet the selection criteria for this research project and, therefore, were excluded.

4.1 Engagement Comparison:

The datasets revealed that both generative AI images and traditional memes are integral to right-wing social media discourse, though they fulfill different roles. According to the operationalized definition of *effectiveness*—*prevalence* (volume) and *engagement*—traditional memes dominate in volume, accounting for 77% of content in Dataset 1 (large accounts) and 90% in Dataset 2 (smaller accounts). This prevalence underscores their role in right-wing discourse as a "workhorse" for disseminating ideological messages across diverse topics. However, when engagement metrics such as Weighted Engagement and Weighted Virality Scores are considered (see Figures 1 to 4), AI-images consistently outperform traditional memes, particularly among large accounts. This suggests that while memes are more widely used, AI-generated images may serve as a more potent vehicle for capturing attention and sparking reactions in targeted contexts.

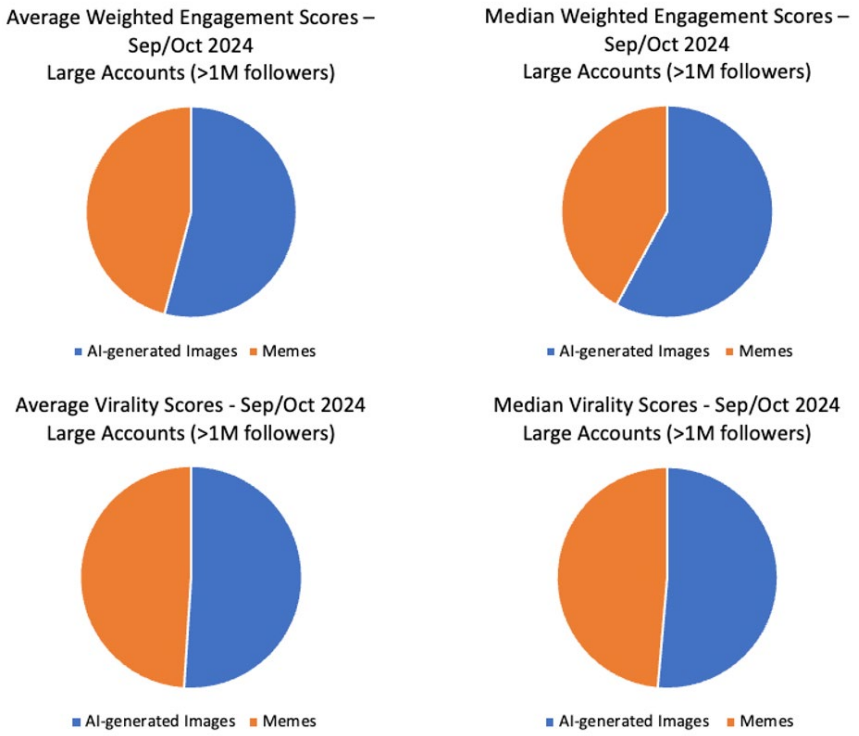

Figure 1: Metrics for Large Accounts.

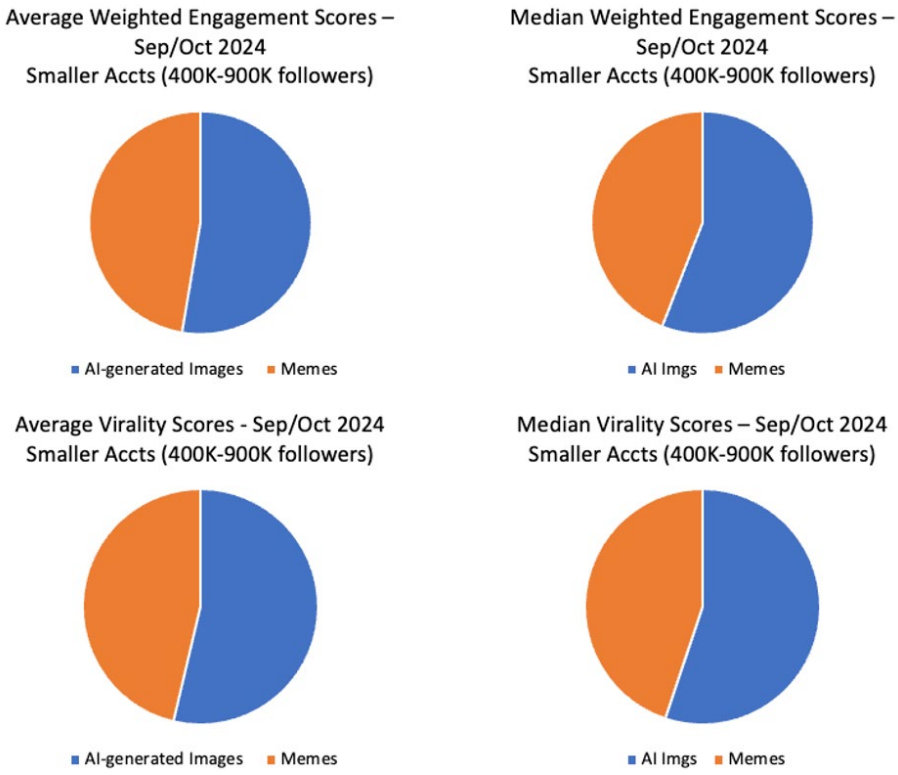

Figure 2: Metrics for Smaller Accounts.

4.2 Analysis of Engagement Metrics: t-Test Results:

To ensure the reliability of this study's findings, t-tests were conducted to assess whether the differences in engagement between traditional memes and AI-generated images were statistically meaningful. These tests helped determine whether the observed differences were likely due to chance or reflected real patterns. For total interactions (likes, comments, and retweets), no significant difference was found, indicating that both types of posts generated similar levels of engagement. However, when considering more nuanced metrics like the weighted engagement scores and weighted virality scores, AI-images showed statistically higher scores. These results highlight that while traditional memes remain a powerful tool for ideological dissemination, AI-generated images tend to foster more focused and deliberate engagement and have a greater potential for viral spread on social media.

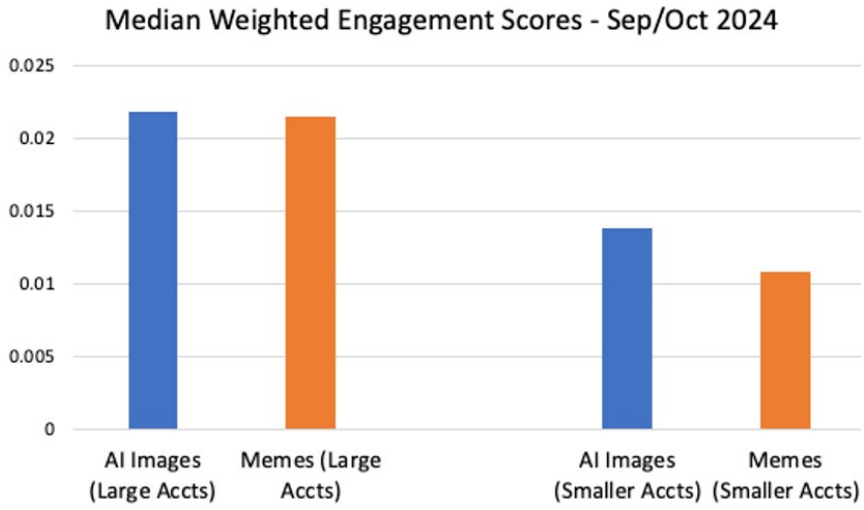

Figure 3: Median Engagement - Combined.

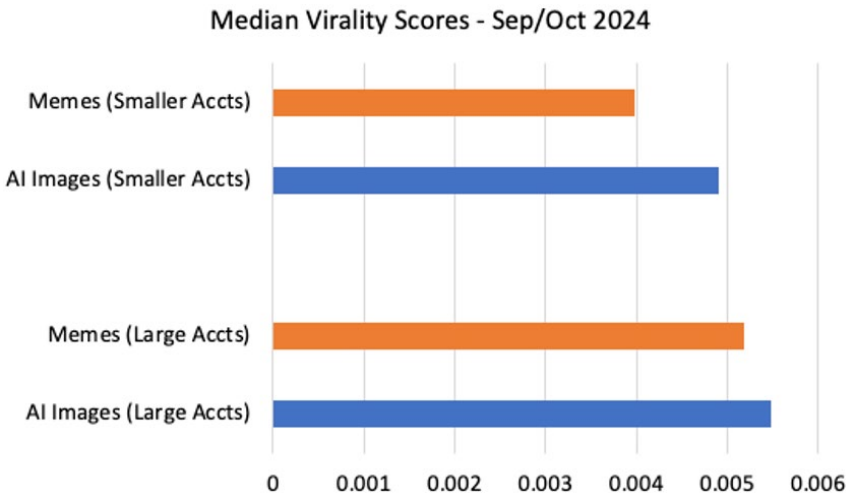

Figure 4: Median Virality - Combined.

4.3 Engagement Patterns: Findings

These findings suggest that memes dominate in volume because they are low-effort, high-reward: they are easy to create, understand, and share – which makes them ideal for widespread use. They leverage inside jokes and cultural references, fostering a sense of community among followers.

On the other hand, AI-generated images, though less frequent, may garner more attention because they are novel and visually striking, potentially breaking through the noise of endless meme scrolling. Thinking back to "scroll culture," AI-generated images may have a competitive advantage due to their eye-catching, high-resolution visuals, which can disrupt habitual scrolling behaviour. AI-images may, therefore, be better suited to single, impactful statements rather than sustained narratives.

4.4 Engagement Variations by Account Size:

An interesting disparity was observed when comparing average total interactions with memes and AI-images within each dataset: in large accounts, AI-images were interacted with more than memes. This was reversed when looking at the smaller accounts (Figure 5).

This presents an intriguing question: why do AI-images outperform memes on larger accounts but not on smaller ones? There are a number of possible explanations for this. Larger accounts may have a more diverse following, making visually striking AI-generated images stand out more. Recalling that memes are nuanced and often require a shared cultural knowledge, AI images may be more universally understood due to their explicit and unambiguous representations of a user's text-prompt. Another explanation may be the accounts' posting strategies: smaller accounts may focus more on memes because they cater to the niche audiences that already share the cultural context for meme comprehension.

4.5 Broader Implications of Findings

The overwhelming frequency of traditional memes reinforces their broader appeal and utility in right-wing discourse; their recurrent appearances and ability to address diverse topics suggest they are effective and versatile tools for broad dissemination of ideological messaging. The slightly higher engagement with AI-generated images suggests they may capture more attention when they appear and may be more effective in sparking reactions for specific, visually striking posts. These patterns might reflect the evolving role of AI in political propaganda and signal a shift toward more personalized, targeted, and emotionally engaging content.

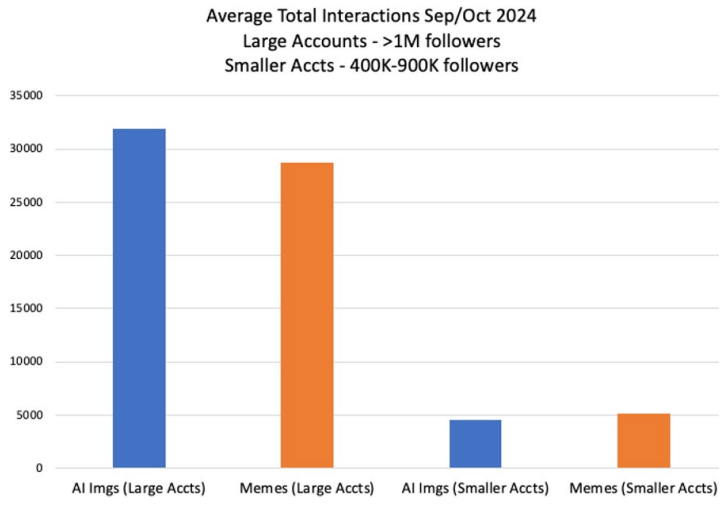

Figure 5: Average Total Interactions – Combined.

5. Discussion

This paper has explored the roles of traditional memes and AI-generated images in the spread of right-wing ideologies on social media. While each format serves a distinct purpose, together, they reveal the emerging strategies used to capture attention and spread ideological messages.

5.1 Effectiveness of Memes:

Traditional memes dominate right-wing discourse in terms of volume – they made up 77% of posts from large accounts and 90% of posts from smaller accounts in this study's datasets. Memes are easy to create and share, often leveraging humour, pop-culture references, and inside jokes to build a sense of community among like-minded followers. This relative simplicity and accessibility make them an effective tool for covering a broad range of ideological topics. However, their higher prevalence does not necessarily translate into stronger engagement. Compared to AI-generated images, memes were less effective at driving interaction on individual posts. In other words, there is a trade-off between memes' strength as a tool for reaching large audiences, and their relative weakness in creating the kind of visual or emotional impact that grabs more direct attention.

5.2 Effectiveness of AI-Generated Images:

Generative AI images proved to be more effective at capturing attention in specific contexts, particularly among large accounts. While not all AI-generated images were popular (possibly due to their bland nature), a few poignant images generated immense engagement rates. Nevertheless, these findings suggest AI images' novelty and polished visuals stand out on news feeds saturated with memes and text-based posts. They appear especially suited for posts aiming to make a bold statement or provoke strong reactions. Put another way, unlike memes, which are well-suited for continuous, low-effort posting, AI-generated images may serve a different purpose: they are attention-grabbers when used sparingly, but

Illustration by Sophia Grace Foder

strategically, for maximum impact.

5.3 Limitations:

This study's scope has several limitations, which has already been alluded to. First, the datasets were limited to only one social media platform (Twitter/X) and covered only a short time-period (September to October, 2024). This focus on a single platform and specific moments in time may not fully capture the broader trends in right-wing social media activity. Second, this study did not consider hybrid formats, such as videos, that might have incorporated AI-generated content (even though these are becoming more common as generative AI evolves). Additionally, without access to advanced analytics tools, it was not possible to analyze the role of algorithms in boosting engagement, to explore user demographics in detail, or to determine when certain posts received the most engagement. The decision to focus on prominent right-wing accounts may also skew the findings, as these accounts may have more resources and (in the case of large accounts especially) professionalized social media strategies.

5.4 Implications for Future Research:

These findings suggest several directions for future research. As generative AI technology becomes more accessible and realistic, its use in digital propaganda is certain to grow. Studies could explore how AI-generated content evolves over time and whether it eventually overtakes traditional memes in their effectiveness for spreading ideological messaging. Expanding the analysis to other platforms, such as Facebook, Instagram, Telegram, TikTok, etc. could also provide a clearer picture of how these two mediums function in different digital ecosystems. Additionally, thematic analysis of the content itself could help identify trends in messaging strategies employed by right-wing groups, as well as to determine which themes are most appealing to their audiences. Finally, understanding the role of algorithms in shaping what users see is key. Platforms that rely on personalized recommendations may be amplifying certain types of content over others, influencing the reach and engagement of right-wing messages in ways that creators might not anticipate.

6. Conclusion

This study originally hypothesized that traditional memes are more effective than AI-generated images in spreading right-wing ideology, due to their subtlety, humour, and cultural resonance. However, the findings reveal a more nuanced reality. Traditional memes are more prevalent and broadly used tools for right-wing ideological dissemination due to their adaptability and broad appeal. Generative AI images, while less frequent, achieve higher engagement rates when used strategically, particularly around emotionally charged or already-viral issues. In other words, the findings demonstrate that memes' effectiveness lies in their prevalence and thematic versatility, while AI images excel in engagement for niche, but impactful, topics.

Works Cited

Benveniste, Alexis. "The Meaning and History of Memes." *The New York Times*, January 26, 2022, sec. Gameplay. https://www.nytimes.com/2022/01/26/crosswords/what-is-a-meme.html.

Bhat, Prashanth, and Ofra Klein. "Covert Hate Speech: White Nationalists and Dog Whistle Communication on Twitter." In *Twitter, the Public Sphere, and the Chaos of Online Deliberation*, edited by Gwen Bouvier and Judith E. Rosenbaum, 151–72. Switzerland: Palgrave Macmillan, 2020.

Bowman-Grieve, Lorraine. "Exploring 'Stormfront': A Virtual Community of the Radical Right." *Studies in Conflict & Terrorism* 32, no. 11 (October 30, 2009): 989–1007. https://doi.org/10.1080/10576100903259951.

Castro-Rea, Julián. "My Girlfriend Became Neo-Nazi: The Right's Presence and Activity in the Internet." *Berkeley Center for Right-Wing Studies Working Paper Series*. California: UC Berkeley: Institute for the Study of Societal Issues, 2019. https://escholarship.org/uc/item/6q68m0sr.

Hoffman, Riley. "READ: Harris-Trump Presidential Debate Transcript." *ABC News*, September 10, 2024. https://abcnews.go.com/Politics/harris-trump-presidential-debate-transcript/story?id=113560542.

Ihlebæk, Karoline, Tine Figenschou, and Birgitte Haanshuus. "What Is the Relationship between the Far Right and the Media?" *C-REX - Centre for Research on Extremism* (blog), September 7, 2020. https://www.sv.uio.no/c-rex/english/groups/compendium/what-is-the-relationship-between-the-far-right-and-the-media.html.

Is It AI? "AI-Generated Image Detector." Is It AI?, 2024. https://isitai.com/ai-image-detector/.

Kalin, Michael, and Nicholas Sambanis. "How to Think About Social Identity." *Annual Review of Political Science* 21, no. 1 (May 11, 2018): 239–57. https://doi.org/10.1146/annurev-polisci-042016-024408.

Kramer, Adam D. I., Jamie E. Guillory, and Jeffrey T. Hancock. "Experimental Evidence of Massive-Scale Emotional Contagion through Social Networks." *Proceedings of the National Academy of Sciences of the United States of America* 111, no. 24 (June 17, 2014): 8788–90. https://doi.org/10.1073/pnas.1320040111.

Lobinger, Katharina, Benjamin Krämer, Rebecca Venema, and Eleonora Benecchi. "Pepe – Just a Funny Frog? A Visual Meme Caught Between Innocent Humor, Far-Right Ideology, and Fandom." In *Perspectives on Populism and the Media*, edited by Benjamin Krämer and Christina Holtz-Bacha. Nomos Verlagsgesellschaft mbH & Co. KG, 2020. https://doi.org/10.5771/9783845297392-333.

Marcellino, William, Nathan Beauchamp-Mustafaga, Amanda Kerrigan, Lev Navarre Chao, and Jackson Smith. "The Rise of Generative AI and the Coming Era of Social Media Manipulation 3.0: Next-Generation Chinese Astroturfing and Coping with Ubiquitous AI." *RAND Corporation*, September 7, 2023. https://www.rand.org/pubs/perspectives/PEA2679-1.html.

Risius, Marten, Morteza Namvar, Saeed Akhlaghpour, and Hetiao Xie. "'Substitution': Extremists' New Form of Implicit Hate Speech to Avoid Detection." *GNET* (blog), June 24, 2024. https://gnet-research.org/2024/06/24/substitution-extremists-new-form-of-implicit-hate-speech-to-avoid-detection/.

Way, Lyndon C.S. "Trump, Memes and the Alt-Right: Emotive and Affective Criticism and Praise." *Russian Journal of Linguistics* 25, no. 3 (December 15, 2021): 789–809. https://doi.org/10.22363/2687-0088-2021-25-3-789-809.