War of Words between India and Pakistan: A Computational Linguistic Analysis of Social Media Content

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Abstract

The digital world has revolutionized war, and it is no longer fought only on the physical borders but also on social media battlegrounds. The contentious history of India and Pakistan has extended their rivalry to social media. The current study examines the war of words between India and Pakistan, and, for this purpose, the researchers have selected the ten most-followed politicians, journalists and five military or defense force Twitter/X accounts. The raw dataset of 213707 tweets has been extracted from January 2023 to August 2025, which was later filtered using a list of 807 India-Pakistan conflict-related keywords pertinent to cross-border disputes, yielding a clean dataset of 63239. The researchers have manually labelled 800 tweets as propaganda or non-propaganda in light of Jacques Ellul's 18-techniques propaganda framework to train the DeBERTaV3-Large model for analysis. The study's findings have revealed that propaganda is a dominant feature of daily communication rather than an exceptional practice, as nearly half of tweets are propagandistic. The highest rate of war-like propaganda is in the tweets of the army/defense forces (75.47%), followed by journalists (61.18%), and politicians (38.81%). However, the cross-national difference is highly profession-based. The findings have revealed that the Indian army exhibits the highest rate of propaganda at 78.41%, followed by Indian journalists (65.64%) and politicians (35.06%). Moreover, the Pakistani journalists have shown the highest level of propaganda at 57.78%, followed by politicians at 51.76%, and military/defense forces (50%). Overall, the Indian army and journalists are found to be more aggressive, warmonger and propagandistic in their tweets as compared to their Pakistani counterparts. In short, the study provides empirical evidence that the conflict between India and Pakistan has shifted to the digital domain, and propaganda plays a crucial role in shaping narratives and public opinion.

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Introduction

The world has witnessed the loss of countless lives and resources in the last few decades due to conflicts among states. Nowadays, people do not depend only on physical battlefields to fight; they can readily engage in combat through digital media. Political disputes and wars are spreading into digital spaces, turning social media into battlegrounds. Propaganda is widely used through digital platforms to sway the public's opinion and spread hatred. It is evident that people intentionally design messages, images, and videos to weaken others' narratives or support their own. This may be propaganda fueling the conflicts, and, ultimately, it evolves into a battle.

The two states, India and Pakistan, are both nuclear powers and have been in conflict since 1947, the year of their independence. This rivalry is not limited to the military sphere; it involves politics, economics, sports, entertainment, and highly engaged locals and the digital media in both states. The restriction of armed forces and modernization have led conflicts to a sophisticated level, i.e., the use of social media and nuclear capabilities (Maharaj, 2000).

Propaganda does not depend on headlines to convey its message; rather, it is expressed so subtly in day-to-day communication. By selecting nouns, adjectives, verbs and adverbs, one can present someone or something in a negative or positive light. It is not merely about propagating misinformation; it is also about the words and decisions that shape a story and change the audience. For example, to induce fear or a sense of morality, individuals employ emotive terms, such as the war on drugs, the war on terror, or the fight to survive. It appears that these are merely random words, but in fact, individuals are not placing them randomly; they are strategic and frame them to manipulate people's moods or thoughts.

Therefore, the language used is vital to understanding social media communication. It is important to understand the unbiased meaning of each social media post. Comprehending how these strategies work may enable people to think critically, form opinions, and make decisions rationally without falling prey to emotional or clever phrasing.

In the contemporary world, it becomes easier to swap points of view, schools of thought, perceptions, and ways of thinking, whether among individuals or among groups and organizations, without resorting to complex modern means. In this manner, it constitutes a threat to the world. Without the sophisticated defense technologies in place, we stand the risk of losing to terrorist threats, failing to apprehend murderers, failing to detect child abuse, and letting the drug supply run, as well as failing to halt human trafficking. That is why it is necessary to use the latest tools to

learn about and identify propaganda, thereby minimizing its effects (Surjatmodjo et al., 2024).

Over the last two decades, in an attempt to gauge news credibility, thousands of initiatives and activities have taken place on the internet, culminating in the creation of a powerful and efficient system of checks and balances (Hardalov et al., 2016). Some of the latest studies employ sentiment analysis methods to identify propaganda to keyword spotting based on text-mining sentiment, and to probabilistic disambiguation methods (Abbasi & Chen, 2008; Pennebaker et al., 2009).

In the language domain, machine learning has been applied to language detection, but surprisingly, the field has also shown interest in propaganda detection, prompting a shift towards contemporary practices. These methods have focused on many multifaceted aspects, such as linguistic patterns, thematic issues, styles, and URL clustering, among others, in determining some propaganda tactics (Manning, 2015). John and Weiss (2017) used Word2Vec and Doc2Vec to identify specific connections between words in propaganda-relevant texts and provided an Artificial Neural Network as a new depiction.

In this research, the researchers have investigated the prevalence of propaganda techniques on social media warfare between India and Pakistan. Moreover, the study compares the two countries' use of war-like propaganda. This paper analyzes tweets by high-profile citizens in both India and Pakistan (such as politicians, journalists, and high-ranking military officials) to analyze how propaganda techniques are employed to propagate specific political discourses. By identifying recurrent patterns in lexical and syntactic choices, the analysis illustrates how bias and prejudice have been integrated into everyday speech.

Rationale of the Study

The rationale of the study is to highlight the fact that the long-standing rivalry between India and Pakistan has deeply moved into the digital world, especially social media. Influential people, including politicians, journalists and military representatives, sway public opinion by carefully designing their messages on Twitter/X. Carefully chosen words help them frame emotional reactions and shape public opinion. Hence, it is crucial to make people understand how language is strategically used to achieve a hidden agenda, and that people should critically evaluate what they come across on social media.

Moreover, another important purpose of this research is to detect propaganda with the help of modern and advanced computational tools. While previous researches have discussed propaganda in multiple ways, there is a lack of systematic methods to identify it in social media communication.

Research Objectives

The research aims to:

1. Investigate the propaganda techniques used in the social media warfare content between India and Pakistan.
2. Compare the frequency of propaganda techniques between India and Pakistan in social media warfare content.

Research Questions

The research paper aims to investigate the following research questions:

1. What are the propaganda techniques used in the social media warfare content between India and Pakistan?
2. How does the frequency of propaganda techniques differ between India and Pakistan in social media warfare content?

Literature review

The modern age has rendered propaganda more relevant than ever before due to changes in communication infrastructures. Previous models of mass media systems, including newspapers, television, and radio, operated under a centralized information-control model, where information is controlled by professional journalists and political powers as the most important gatekeepers. In comparison, the emergence of digital platforms has decentralized the process of production of messages and erased the line separating factual, persuasive, and manipulative information (Bakir & McStay, 2021). Social media platforms such as Twitter, Facebook, and YouTube have become arenas of symbolic struggle, where individuals, institutions, and algorithmic systems compete to determine meaning and truth simultaneously. It is an environment where propaganda can succeed through an engaging mechanism, an affective appeal mechanism, and an amplification mechanism driven by algorithms instead of a hierarchical control mechanism.

Social media platforms such as Twitter, Facebook and YouTube have become arenas of symbolic struggle, as people, institutions, and algorithmic systems all vie to establish meaning and truth. In this climate of promoting propaganda to flourish, it operates through engagement, affective appeal and algorithmic amplification processes rather than

hierarchical regulation. Social media has become invaluable to state actors and media institutions in the two countries to advance national narratives, to persuade international audiences, and to mobilize national sentiment. These digitally mediated conflicts, sometimes called information warfare, are maintained primarily through linguistic techniques that underline the themes of patriotism, threat construction and collective identity (Udupa, 2021).

Social media plays a significant role in creating conflicts, as it has become a major source of news for people across the globe (Fuchs, 2021). A large number of people rely solely on social media for daily news and information because it is readily accessible. A survey conducted by The Digital News Report (2021) revealed that six out of ten people with access to digital media depend on social media for daily news. The news-addicted community considers it a main source for understanding worldwide conflicts, especially the Russia-Ukraine war. According to Jones (2019), Russia has utilized social media as a weapon that is trained by a flock of fake social media accounts to drive online discussions related to war.

The global community mostly uses Instagram, Facebook, and Twitter to share political and other content. Social media is the most common channel for news about the war between Russia and Ukraine. However, one should be mindful when selecting a news source in the post-truth era, as social media content can easily be manipulated or fabricated (Guess, Nyhan & Reifler, 2018). Social media consumption is rapidly increasing, especially around political issues and international conflicts, and it is somehow fueling conflicts between countries.

Carlson (2020) refers to social media as network media because people can easily create content and share subjective truth or false information. It has become an unprotected source of spreading hoaxes and hatred towards other people or nations. People should not unquestioningly trust these platforms and should be mindful before sharing any news. According to Yadlin Segal and Oppenheim (2021), social media is classless, which is why the same people play both customer and content-creator roles. It not only produces low-quality content but also spreads misinformation to fool people about the actual information.

Over time, there has been a significant shift in the use of internet propaganda. Initially, authoritative institutions used it as a powerful tool to influence public opinion, but later the public also began using the same tools and techniques (O'Shaughnessy, 2012). Currently, everyone can post whatever they want on social media platforms such as TikTok, Twitter, YouTube, Instagram, and Facebook (Winter, 2015). The availability of affordable phones, cameras and computers has made it highly convenient for people to create their own media. The dogmatic communists have

exploited this to the fullest by making the internet their operational area (Hoffmann, 2006).

Moreover, users can also freely participate in extremist movements. People support extremist narratives simply by clicking the like button. Based on prior literature and user data, YouTube is one of the most popular distribution channels for internet videos. It offers space for audiovisual (AV) propaganda and counter-message content. As the most frequent users of YouTube, especially teenagers are somehow exposed to the platform's hype, which is not always intentional. The prevalence of propaganda in AV media makes them highly attractive to the audience and increases their reach among large numbers of recipients (Seib & Janbek, 2011).

The transition from broad-based propaganda to very specific messaging indicates a significant evolution in influence strategies. In contrast to conventional telecast models, new platforms, particularly digital media, collect extensive user data, allowing the focus to be narrowed to a demographic, psychographic, and behavioral profile. Reports such as Matz et al. (2017) show that when the message of propaganda appeals is shaped, rather than being generalized, it is much more convincing.

Contemporary social media propaganda no longer relies solely on bare-handed propaganda techniques; it emphasizes persuasive writing and the creation of viral content. This plan acknowledges that effective persuasive messages should be grounded in existing cultural stories and social identities. Freelon et al. (2020) highlight the importance of propaganda in Russian influence on the 2016 U.S. election, which did not depend on the support of a particular candidate but instead on the glorification of polarizing cultural ideas.

The theory of mimetic war has emerged as a significant framework in evaluating the impact of propaganda on social media. Memes -- cultural items that transmit ideas can inoculate propagandistic material in an impulsive and interesting way. Such an impact must be explained by a convergent, multidisciplinary approach grounded in cultural theory, cognitive psychology, and network science (Shifman, 2014).

The gaps relevant to the current study can be addressed using a computational linguistic approach; thus, the present work provides both conceptual and methodological contributions to the field of digital propaganda analysis. It provides the background for the following methodology, which operationalizes these theoretical findings into an organized system for data collection, annotation, and computational modelling of Indo-Pak social media discourse.

Theoretical Framework

The current study is based on the foundation of propaganda theories and models to help understand how digital information is planned, structured, circulated, and normalized. There are various theories and models, providing a strong foundation to this research such as Chomsky and Edward's Propaganda Model, which align with this research. The Propaganda Model is an effective conceptual tool that was initially formulated by Edward S. Herman and Noam Chomsky, which allows analyzing the way media content can be arranged to support specific accounts of the events. It further legitimizes mainstream ideologies, and influences audience interpretation. The Propaganda Model provides a detailed account of how the propaganda is planned, structured and delivered, but it does not offer a practical methodology for identifying propaganda. That is why researchers have used Jacque Ellul's model of propaganda as a framework, since it can be used to analyze the influence of digital media settings on the development of perception, the reproduction of hegemonic discourses, and the promotion of strategic policies.

Jacques Ellul provides a detailed Framework to detect propaganda in his book *Propaganda: The Formation of Men's Attitudes* (2021). His model gives in-depth guidance for identifying propaganda, but it is crucial to understand the specifics of the propaganda he outlines as each technique of propaganda operates differently. Furthermore, they may affect people's emotions and perceptions.

Jacques Ellul's Propaganda Techniques

Labelling or Name-calling

By associating ideas with derogatory connotations, it seeks to simplify complex situations. Using manipulative rhetoric, promoters employ techniques to achieve their target by influencing people's opinions and perspectives in a desired direction. For instance, in wartime, one side may use terms like 'terrorist' or 'traitor' to dehumanize opponents or make them seem dangerous. This type of language creates a negative image and stirs up hatred towards the targeted group.

Language loaded

It draws attention to the usage of strong yet positive language to convince the public. For instance, a political leader calls his rivals 'corrupt

mafia' while describing his own companions as 'sons of the soil'.

Repetition

Now it is all about repeating a message to normalize it, so the public has to accept it by any chance. In the Pakistani context, a slogan repeatedly raised for decades by Zulfikar Ali Bhutto and PPP (Pakistan's People's Party), "Roti, Kapra aur Makan" (Bread, Clothing, and Shelter) reinforced their populist image.

Minimization or Exaggeration

This technique exaggerates or downplays elements to shape perspectives by making something sound larger, better, worse, or less important than it really is. For instance, "everybody is furious about the newly introduced policy by the government". The reality might be that some people are upset and furious, replaced by everyone. Even phrases such as "I was not fighting with her; we were just playing" can distort reality by softening conflict.

Doubt

This investigates the reliability of something or someone. For instance, the competitor asks his opponent if he is truly ready to be a mayor.

Appeal for Fear/Harm

This technique seeks to influence people towards a specific opinion, often by playing on fear, bias, or perceptions. For example, "stop those refugees; they are terrorists" to reinforce a one-sided, harmful viewpoint. For example, during election campaigns, political leaders warn people, "If the opposition party comes to power, the economy will collapse, and the country will fall into foreign control".

Flag-waving

This technique promotes certain actions, ideas, or groups by appealing to powerful national pride, identity, or emotional loyalty. It may be possible; it highlights aspects such as color, creed, gender, or political views to gain help. A statement such as "Entering into this battle will give

us a brighter future" evokes patriotic feelings to justify ~~a~~ gathering or a certain action.

Oversimplification of Causes

Suppose there are several reasons or causes for a problem. In that case, people reduce it to a single cause or scapegoat, making it easier to blame another group or an individual to mislead others.

Slogans

Slogans are essentially tags or stereotypes designed to stir sentiment, and they are emotionally appealing. E.g., "Naya Pakistan".

Call for Authorization

This technique suggests that a source's validity increases the credibility of evidence. This tactic relies on the credibility of trusted experts, high-level officials, public figures, or organizations to lend legitimacy to a message. By using their credibility, the goal is to influence people without questioning it. For instance, most of the time in religious or political settings, it is said, "Islamic scholars say this, and that's why it is right".

Fallacy of Black and White, Dictatorship

It refers to the practice of framing a situation as having just two options, no other way, while ignoring the other alternatives. This tactic can be used to steer public opinion. For instance, saying you must choose between being a Republican and a Democrat. Alternatively, asserting that war is the only option, we have no alternatives.

Thinking-Finishing Cliché

These commonly used phrases shut down critique or complex issues. They provide simplistic yet vague responses, often deflecting reflection. For example, a statement such as "this is all a foreign conspiracy" overshadows the local causes of problems.

Whataboutism

It refers to a technique in which one side distorts the position of the opposing party. They do not reject their claim or allegation; rather, they accuse them of hypocrisy. For example, when PTI raises concerns about PMLN corruption, PMLN, instead of addressing the allegations, bounces back with the Toshakhana gifts case.

Reduction and Hitlerum

This form of propaganda seeks to dissuade people from supporting a proposal or action by mingling it with individuals or communities that trigger public fears. It relies on negative labelling rather than logic. A typical example might be, "only a communist would think like that".

Red Herring

The red herring technique involves shifting attention from the main argument by presenting emotionally expressive material (Weston, 2018). It interrupts logical discussion by shifting focus to peripheral topics (Teninbaum, 2009). For example, rather than evaluating the effectiveness of the death penalty, the speaker redirects attention to the sentimental suffering of the family of the victim, but not directly relevant to the claim being discussed. In a political context, when asked about rising inflation, political leaders shift the focus to global factors.

Bandwagon

The bandwagon technique urges individuals to conform by suggesting that the majority already supports a specific action. For example, "Are you willing to vote for Clinton as president? As 57% say yes."

Obfuscation, Intentional Vagueness & Confusion

This technique relies on ambiguous language that invites many interpretations, leading the audience to draw unintended conclusions. For instance, the statement "it is a positive step to listen to victims of theft" can be interpreted as implying unquestioned acceptance of any action they take, even if it is irrational or unjust.

Straw Man

This fallacy occurs when someone avoids confronting the true essence of an argument by replacing it with a weaker, misinterpreted, or hyped-up version (Walton, 1996). By caricaturing Weston's opposing view (2018), they created the illusion of rejection without engaging with its real complexities.

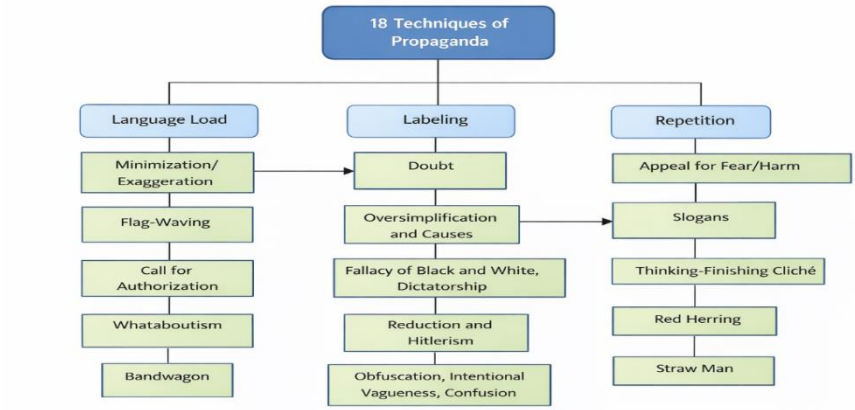

Figure 1: Propaganda Techniques

Methodology

The current research is quantitative, and accordingly, the researchers have extracted data from Twitter/X. They have carried out annotations at several levels: document-level, focusing on general themes or the contextual meaning of the topic; sentence-level, focusing on the reported structure; and word-level, focusing on language structure. The description of the research methodology and data analysis systems is provided in the Study's Framework.

In the social media warfare between India and Pakistan, the researchers have employed a framework for identifying propaganda that comprises data collection, pre-processing, feature engineering, and classification.

The researchers employed a non-probability purposive sampling method to gather information. To do this, the ten most-followed politicians, ten prominent journalists, and five military personnel from both India and Pakistan were selected by analyzing their Twitter activity over the mentioned period.

- Hamid Mir, Mubasher Lucman, Kamran Khan, Imran Riaz Khan, Asma Shirazi, Syed Talat Hussain, Najam Sethi, Saleem Khan Safi, Sana Bucha and Moeed Pirzada.
- Imran Khan, Asad Umar, Maryam Nawaz Sharif, Sheikh Rasheed, Shehbaz Sharif, Chaudhry Fawad Hussain, Bilawal Bhutto, Shah Mehmood Qureshi, Jahangir Tareen Khan and Ali Muhammad
- DGISPR, AVM Shahid Lateef, DGPR, Ex-servicemen Society and Amjad Shoaib
- Rajat Sharma, Rajdeep Sardesai, Sudhir Chaudhry, Barkha Dutt, Punya Prasun Bajpai, Rana Ayyub, Sushant Sinha, Deepak Chaurasia, Sakshi Joshi and Shefali Vaidy
- Narendra Modi, PMO India, Amit Shah, Arwind Kejriwal, Rahul Gandhi, Rajnath Singh, BJP, Dalai Lama, Arun Jaitley and Sushma Sawarj
- ADG PI, Gaurav Arya, Gen Bakhshi, Major DP Singh and Surya Command

Data has been collected from Twitter's website using Twikit (an unofficial API). The raw dataset consisted of 213707 tweets, which were later filtered based on hashtags and keywords related to various cross-border disputes, yielding a clean dataset of 63239. A list of 807 India-Pakistan conflict-related keywords was compiled, covering politics, economy, entertainment, sports and war.

As part of dataset validity checks, specific accounts are excluded from analysis due to availability constraints, including deceased public figures (e.g., Arun Jaitley and Sushma Swaraj) and an account associated with hacking claims (AVM Shahid Lateef). The dataset was built through a structured pipeline from collection to multi-level annotation:

1. **Large-scale tweet collection:** Tweets were collected from the selected accounts across the study period using an automated collection workflow, and where available, reply threads were additionally retrieved for public response analysis.
2. **Text cleaning and preprocessing:** The raw collection was cleaned to remove low-information or non-textual items (e.g., posts dominated by links, emojis, or media-only content), producing a text-focused corpus suitable for NLP modelling and comparative analysis. This step aligns with the study's preprocessing principles described earlier (normalization, removal of noisy tokens, and preparation for modelling).
3. **Conflict-driven filtering using keywords and hashtags:** To focus the analysis on India–Pakistan conflict discourse, tweets

were filtered using a curated lexicon of **conflict-relevant keywords and hashtags**, designed to capture multiple narrative frames and multilingual variants. The lexicon explicitly contains English as well as Urdu/Hindi/Romanized expressions and includes terms related to militarized escalation, terrorism discourse, diplomacy, media warfare, nationalism, and war-as-spectacle framing.

4. **Translation to English for unified modelling:** Because the corpus includes multilingual and code-mixed content, tweets (and replies where applicable) were translated into English through google and validated to ensure consistent downstream modelling and comparability across actors and countries. The data collection process is presented in the figure below.

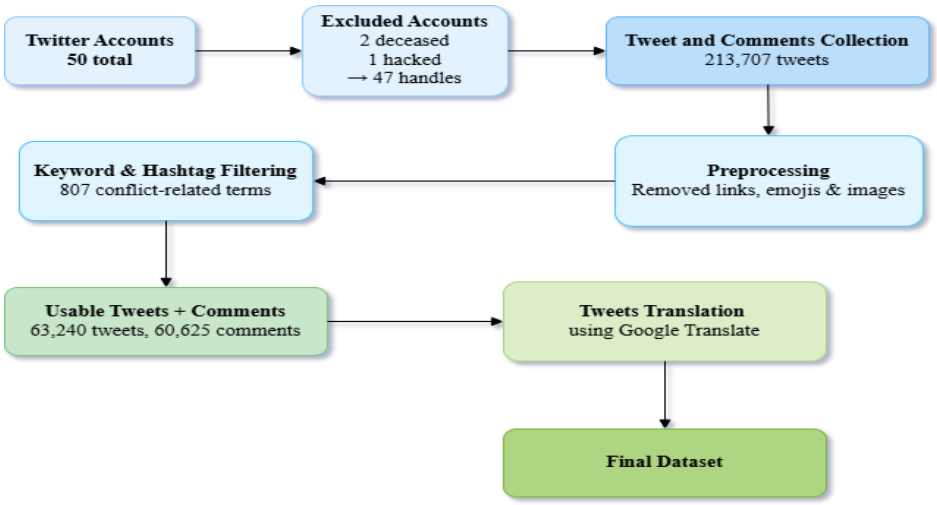

Figure 2: Data collection and preprocessing

5. **Corpus collection and annotation logic:** The annotation scheme followed the study's theoretical framework of propaganda techniques and operationalized propaganda at two levels: (1) a binary label ("Propaganda Label": Propagandistic vs. Non-propagandistic), and (2) multi-label technique annotation ("Propaganda Techniques"), allowing a single tweet to contain multiple techniques. Initial manual labelling was conducted on a subset of 800 tweets to establish the supervised learning basis for scaling annotation. Two annotators independently reviewed each tweet, and the third reviewer resolved disagreements. Inter-annotator reliability was assessed using Cohen's Kappa, achieving 0.85, indicating strong agreement for the binary propaganda decision under the study's labelling scheme.

To scale the binary propaganda label consistently beyond manual annotation, the study used a supervised transformer-based classifier fine-tuned for tweet text classification. The selected backbone model was DeBERTaV3-Large, chosen because peer-reviewed evaluations showed it achieved an average score of 91.37 on GLUE (General Language Understanding Evaluation), indicating strong performance on meaning-sensitive sentence-level classification tasks.

A manually labelled training subset was prepared from the dataset using "Translated tweets" as model input to label propaganda. The labelled binary training dataset contained 800 tweets: 403 Propagandistic and 397 Non-propagandistic. The fine-tuned model was then applied to label the full corpus used for the analysis.

Binary classification alone did not explain how propaganda was linguistically constructed; therefore, a second supervised classifier was used to predict 18 propaganda techniques, since a single tweet may employ multiple strategies simultaneously. This framing followed established propaganda detection research that modelled techniques as fine-grained, co-occurring categories rather than a single label.

For technique training, only tweets labelled as propagandistic were used across the 18 categories. The technique training dataset contains 403 propagandistic tweets (with technique annotations). The same backbone model (DeBERTaV3-Large) was retained and configured for multi-label classification, producing probability scores per technique and assigning labels using a fixed decision threshold. The output of this phase was stored in the dataset's "Propaganda Techniques" field.

Findings

It discusses the data analysis conducted to answer the research questions of the current study. Drawing on theoretical and methodological foundations, the researchers have analyzed conflict-related content on Twitter between India and Pakistan. The findings of the study are presented statistically here based on the use of propaganda techniques, comparisons of propagandistic vs non-propagandistic tweets, comparisons of their use across borders, the grammatical categories used to present propaganda, and public sentiments under propagandistic and non-propagandistic tweets.

The researchers have the collected data from the accounts of highly influential personnel from both countries. For this purpose, 10 politicians, 10 journalists, and 5 (ex /official) defense personnel from each country were selected. The data were collected based on the highest number of followers. There was a clean dataset of 63239 tweets.

The analysis of the data is organized into the following sections:

- Frequency of the propagandistic vs non-propagandistic tweets.
- Comparison of the use of propagandistic vs non-propagandistic tweets across journalists, politicians, defense forces, and across countries.
- Frequency of the kinds of propaganda based on frequent use.

For data analysis, the researchers have used multiple metrics. The purpose of using different metrics was to achieve transparent results. The researchers have used 95% confidence intervals ($CI_{95\%}$) to show the uncertainty around each percentage, not just a single point estimate. Moreover, the chi-square test was also used to investigate the difference in the categories, such as across countries, profession, or grammatical categories. The size of the table was determined by degree of freedom (df), while the significant difference was assessed through the p-value. To present the exact difference or strength of association between two variables, the researchers used Cramér's V. Mean, standard deviation and median were used for numerical variables.

Identification of Propagandistic and Non-Propagandistic Tweets

This section of the study discusses research question 1, i.e. What are the types of propaganda used in social media warfare content between Pakistan and India? For this purpose, the researchers manually labelled 800 tweets on a binary level as either propaganda or non-propaganda to train the language model to do the descriptive analysis. After that,

propagandistic tweets were assigned one or more labels based on the 18 techniques of the propaganda framework, enabling fine-grained identification of which propaganda forms dominate the discourse and how they co-occur within a single tweet. To make it easier to understand, the researchers also created a separate column for evidence that clarified and verified the phrases that led to the assigned labels.

Table 1: Overall distribution of Propagandistic Vs Non propagandistic Tweets (N = 63239)

Propaganda Label	Count	Percent
Non-Propagandistic	32194	50.91%
Propagandistic	31045	49.09%

Table 1 reveals that there were 63239 tweets in total, of which 49.09% (31, 045) were propagandistic and 50.91% (32, 194) were non-propagandistic. Near parity is analytically useful because it reduces the risk that solely an overwhelmingly dominant class drives patterns in propaganda techniques and supports stable comparative inference. These tweets manipulated the language containing war-like words and phrases such as*, terrorists, threat, security alert, stand with our brave soldiers against terrorists, zero tolerance for terrorism, defending national integrity, targeting our people, barbaric* and *shameful act*, exhibiting that such emotionally loaded language is employed to generate aggressive behavior among the people. It also creates hatred among both the states, and they are ready to fight each other.

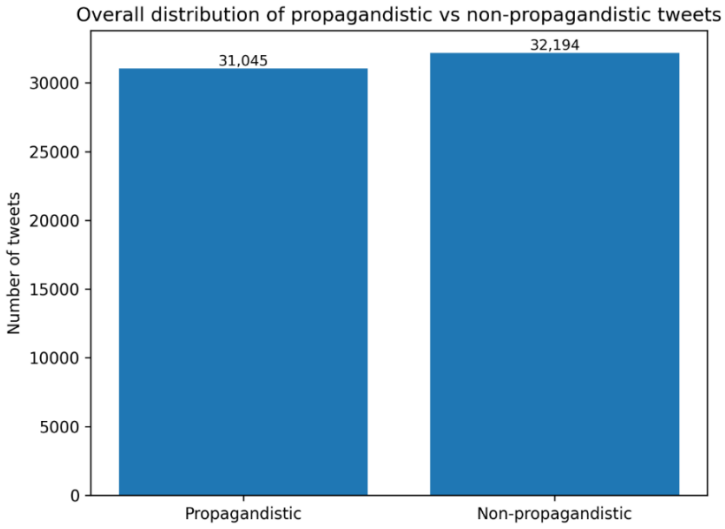

Figure 3: Overall distribution of propagandistic vs non-propagandistic tweets

Table 2: Frequency of propagandistic and non-propagandistic tweets across professions

Profession	Propagandistic n (%)	Non-Propagandistic n (%)	Total	χ^2 (df=2)	p-value	Cramér's V
Army	3332 (75.47%)	1083 (24.53%)	4415			
Journalist	13356 (61.18%)	8474 (38.82%)	21830			
Politician	14357 (38.81%)	22637 (61.19%)	36994			
Overall association	—	—	63239	4071.13	p < .001	0.254

Table 2 displays the overall distribution of propagandistic vs. non-propagandistic tweets across all three professions in this study. Table 2 presents the data from both countries combined. The study found that the highest rate of propaganda was in the tweets of the army/defense forces (75.47%), followed by journalists (61.18%), whereas politicians were less propagandistic than the other two groups, with a rate of 38.81%. The total

number of tweets, propagandistic tweets, non-propagandistic tweets, and their percentages are presented for each profession group in the table above.

The results of the chi-square test show a statistically significant association between profession and propaganda classification, χ^2 (df = 2) = 4071.13, $p < .001$. These values indicate that the distribution of propagandistic and non-propagandistic tweets is not uniform across the three professional groups. The strength of this association, measured by Cramér's V, was 0.254, suggesting a moderate relationship between profession and the likelihood of producing propagandistic content. In other words, a professional role significantly shapes the probability that tweets are propagandistic in this conflict-related dataset.

There is a difference in the frequency of propaganda across professions in India and Pakistan, but the overall propaganda mechanism is somewhat identical in both the countries. The common noted mechanism is the use of lexical triggers such *as enemy, violator, aggressor, traitor, enemy, loser, terrorist, extremist, hostile*, etc. are used to delegitimize opponent. Flag-waving is established through words such as *patriot, national pride, sacrifices, martyrs*, and hashtags like # Nation First, #Unity, #StandwithNation etc. Fear is evoked through words such as *threat, attack, danger, security alert* etc., and intensifiers such as *undoubtedly, strongly, firmly, surely* etc. are employed to emphasize the message. Figure 4 below displays the visual representation of differences in propaganda across professional groups.

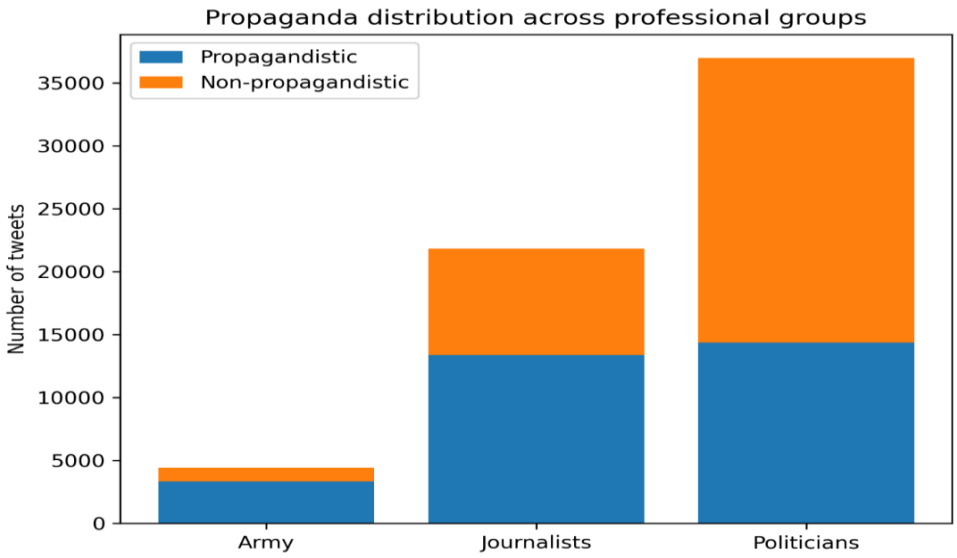

Figure 4: Overall comparison across professions

Frequency of Propaganda Vs. Non-Propaganda across Each Group

Figures 5, 6 and 7 explain the cross-national differences within the same occupation. It clearly exhibits that Indian army/defense accounts employ very high propaganda techniques, displaying (78.42%), whereas Pakistani army/defense accounts in this corpus split evenly (50/50). Journalists exhibit high levels of propaganda sharing in both countries, while there is a clear difference between politicians. Indian politicians tilt towards non-propagandists, whereas Pakistani politicians are approximately balanced. This indicates a different rhetorical equilibrium in political communication between the two states.

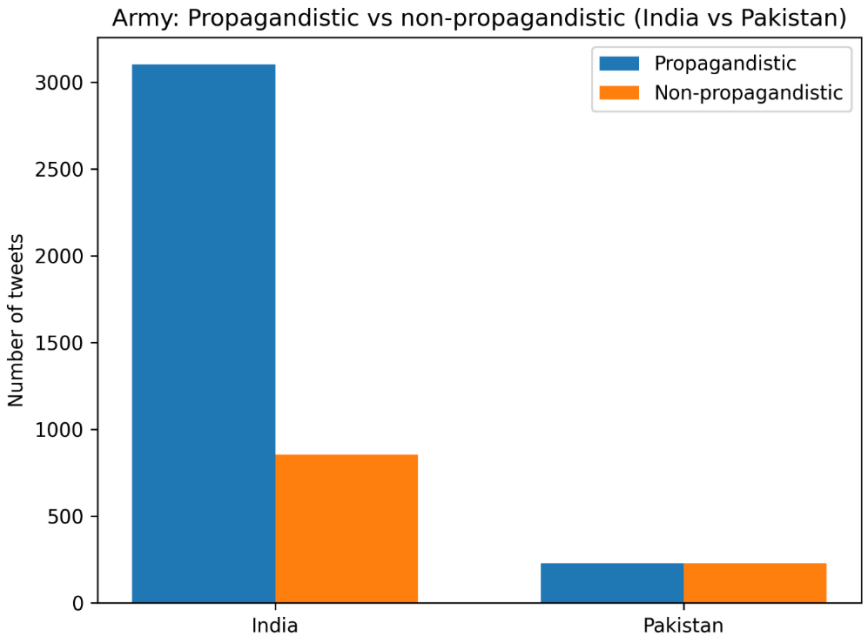

Figure 5: Propaganda vs non-propaganda across nations

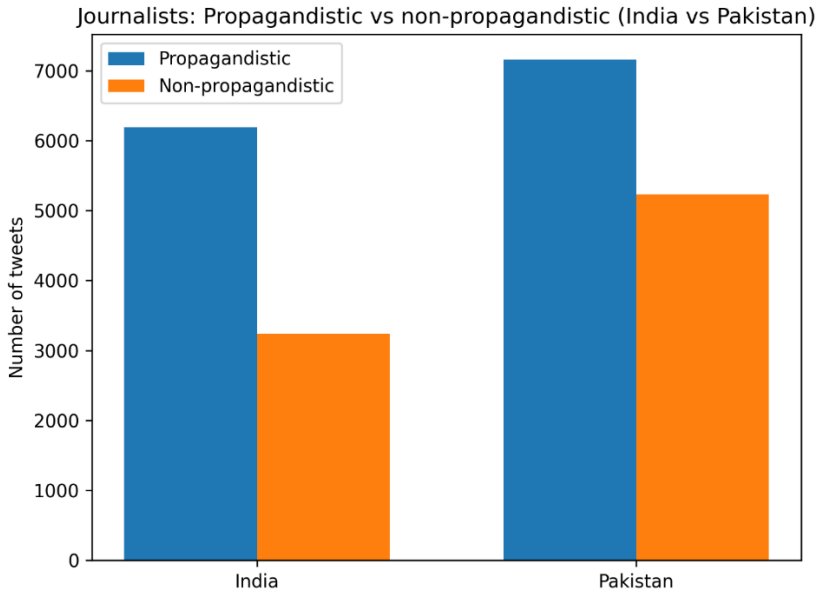

Figure 6: Journalists: Propaganda vs non-propaganda across nations

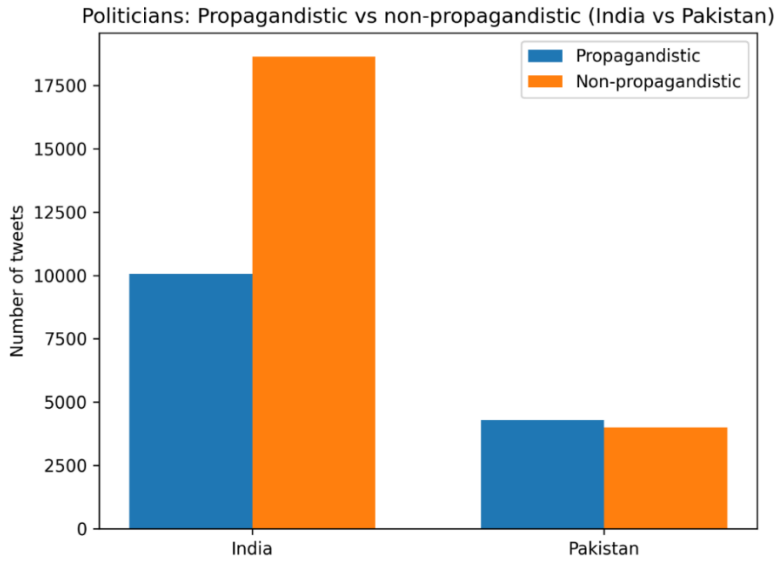

Figure 7: Politicians: Propaganda vs non-propaganda across nations

Propaganda vs. Non-Propaganda Distribution by Country and Professional Groups

Table 3: Propaganda vs. non-propaganda distribution by country and professional groups

Country	Profession	Propagandistic	Non-Propagandistic	Total	Propaganda %
India	Army	3,103	854	3,957	78.41
India	Journalist	6,192	3,240	9,432	65.64
India	Politician	10,064	18,637	28,701	35.06
Pakistan	Army	229	229	458	50.0
Pakistan	Journalist	7,164	5,234	12,398	57.78
Pakistan	Politician	4,293	4,000	8,293	51.76

Table 3 presents the distribution of propagandistic vs. non-propagandistic tweets across professions in both countries. The findings have clearly unveiled that the Indian army exhibits the highest rate of propaganda, with a percentage of 78.41. Indian journalists have also shown a noticeable level of propaganda, i.e., 65.64%. Indian politicians have shown less propaganda than the other two professions, i.e., 35.06%.

The results also revealed that in the tweets of Pakistani army officers, the ratio of propaganda vs non-propaganda was 50% each. Pakistani journalists showed the highest level of propaganda at 57.78%, followed by politicians at 51.76%. Overall, the Indian army and journalists are found to be more propagandistic in their tweets as compared to their Pakistani counterparts. The highest level of propaganda used by Indian military represents that to gain public support, they use strong narrative pertinent to security and to justify they actions. The frequent triggering words used by Indian military noted in the current study are high-alert, terrorist, operation, operation sindoor, mission accomplished, destroyed, area cleared, enemy forces, retaliation, etc. These words and phrases express control, strength and legitimacy of military actions. Indian journalists also seem to be practicing propaganda through emphasizing on the military statements. As compared to Indian military, Indian politicians have shown a controlled and diplomatic communication. Pakistani discourse seemed to be more balanced as compared to Indian discourse but it is not devoid of conflict-oriented language.

The results are represented in the figure below.

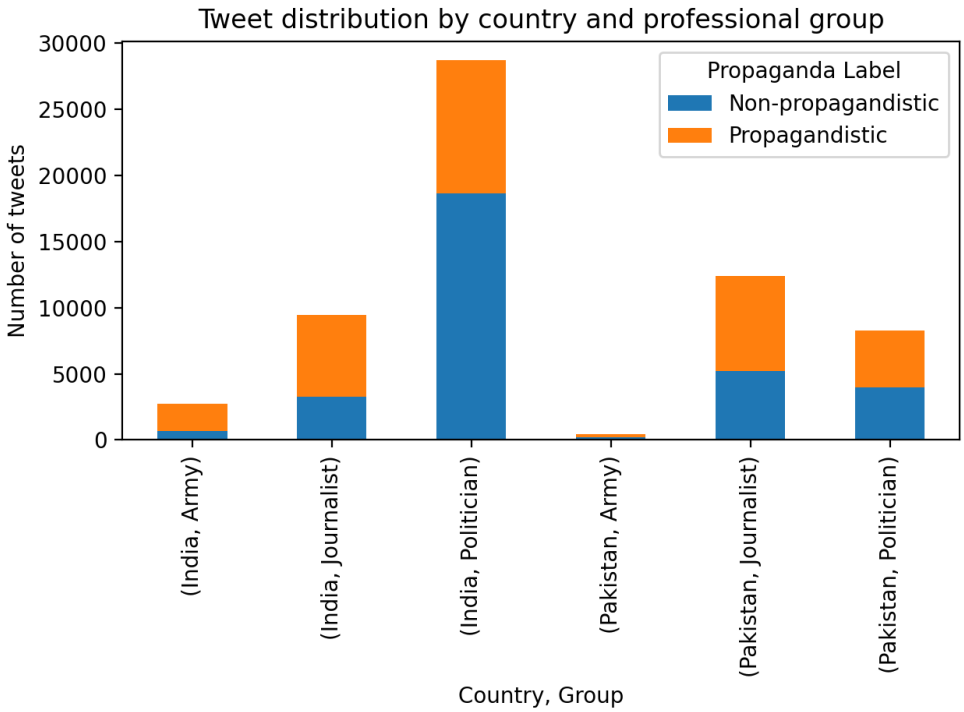

Figure 8: Tweets Distribution by Country and Professional Groups

Propaganda Techniques from the Dataset

It was not feasible to discuss a large set of propagandistic and non-propagandistic tweets, along with supporting evidence. In this study, the researchers provided only limited examples to justify the classification's consistency with the criteria.

Propagandistic examples

1. **Tweet:** *OPERATION SINDOOR Pakistan Armed Forces launched multiple attacks using drones and other munitions along entire Western Border on the intervening night of 08 and 09 May 2025. Pak troops also resorted to numerous ceasefire violations (CFVs) along the Line of Control in Jammu and Kashmir. The drone attacks were effectively repulsed and befitting reply was given to the CFVs. Indian Army remains committed to*

safeguarding the sovereignty and territorial integrity of the Nation. All nefarious designs will be responded with force. Pahalgam Terror Attack Indian Army Justice Served (@adgpi, 2025, May 09)
Label: Propagandistic (Flag waving)

Evidence: The tweet persistently invokes pride by linking military actions to sovereignty and territorial integrity and by using phrases such as *effectively repulsed*, *befitting reply,* and *justice served*. Moreover, it glorifies the military response as heroic and morally justified. This language elevates the military actions and invokes public sentiment to align with their interest to show patriotism.

Tweet: *Informing Pakistan at the start of our attack was a crime. EAM has publicly admitted that GOI did it. 1. Who authorized it? 2. How many aircraft did our air force lose as a result?* (@RahulGandhi, 2025, May 17).
Label: Propaganda (Doubt)

Evidence: The tweet casts suspicion on the government and the military by raising questions. The rhetorical questions in the tweet imply doubt on the actions of government and military forces without sharing any evidence. It also raises skepticism in the public about competence of the authorities by reinforcing suspicion. It is a core feature of the propaganda technique 'doubt' to raise unanswered or rhetorical questions.

Tweet: *In Pakistan and PoK, the way our armed forces have destroyed terrorist camps is a matter of pride for all of us* (@rajnathsingh, 2025, May 08).
Label: Propaganda (Labelling, Flag waving)
Evidence: Calling Pakistan a terrorist and their own military action as a source of pride.
It simplifies a complex geopolitical issue into morally charged labels to delegitimize the opposing country. Moreover, calling it 'a matter of pride for us' incites a sense of collective national identity, resulting in the emotional alignment of the public with the military actions. The association of military success with

national pride encourages the public to support them to prove their patriotic unity.

Tweet: *The time has come to deal with those who created a fake narrative of hope for peace between India and Pakistan and said that art has no borders. The Ministry of Information and Broadcasting has banned the release of Abir Gulaal, a film starring Pakistani actor Fawad Khan. Fawad Khan Pahalgam Abir Gulaal Pahalgam Terrorist Attack pahalgam attack Pahalgam Indian Army Eastern Command Indus_Water_Treaty Deepak Chaurasia Deepak Chaurasia Bollywood Sushmita Sen* (@DChaurasia2312, 2025, April 24).

Label: Propaganda (Black and White / Fallacy of Dictatorship)
Evidence: It frames the situation as there are only two options left: either support India's stance or be complicit in a fake narrative of hope. This message creates a very tricky situation for the audience, implying that if they do not support government, they automatically support the false narrative, which is fabricated and harmful as well. People are not allowed to opt for any middle ground, and hence they are pushed to agree with one side of two options, and since the second option is already portrayed as false or harmful, people are left with no option except supporting it. This is a key feature of black-and-white propaganda technique.

Tweet: *India has clean bowled Pakistan in cricket diplomacy. Despite Pakistan's refusal, it will have to come to India to play the World Cup, albeit out of compulsion, and will have to play the match with India at the Narendra Modi Stadium in Ahmedabad, unwillingly. Not only this, after losing 7 times in the World Cup, he also knows that he will have to be beaten by India for the eighth time and will have to lose, but despite this he cannot refuse because ICC has clearly said that beggars do not have a choice. When India refused to play the Asia Cup in Pakistan, the ICC changed the venue of the match for India to Sri Lanka. Pakistan was under the misconception that it would insist on not playing the World Cup in India and the ICC would agree, but the ICC showed Pakistan its status, told it not to try to become India and none of its conditions would be accepted. This is called the power*

of India, in front of which Pakistan is breathless (@DChaurasia2312, 2013, June 27),

Label: Propaganda (Exaggeration, Loaded language)
Evidence: Portrays India as dominant and strong, and Pakistan as weak and helpless. Used loaded language such as *clean bowled Pakistan*, *beggars do not have a choice*, and *Breathless*.
This tweet is replete with exaggeration and loaded language to portray a narrative that India is superior to Pakistan. Using metaphors like "clean bowled Pakistan" and making hyperbolic claims about India's victory in future, which is not guaranteed, is far from factual representation. Calling Pakistan breathless and beggars indicates emotionally charged connotations. This kind of choice of words evokes superiority in the audience without providing a neutral or balanced view of the situation.

Tweet: *Inzamam ul Haq accuses India of ball tampering because Arshdeep Singh managed reverse swing. No proof given. Just one insanely jealous former Pakistani cricketer who cannot digest the success of an Indian fast bowler. What the duck Inzamam ul Haq?* (@majorgauravarya, 2024, June 26).
Label: Propaganda (Name Calling)

Evidence: Instead of addressing the allegation, the tweet mocks him by calling him insanely jealous and duck.
In this tweet, instead of factually negating the opponent's claim, the person calls him with negative names to deliberately shift the focus from the claim to the person's personality by mocking and calling him duck.

Tweet: *The Indian Foreign Minister has no competence, the Indian Foreign Minister is a fool and a fascist who is the global spokesperson of Modi's extremist government, only our Foreign Minister and his team were idiots who reached Goa without thinking* (@fawadchaudhry, 2023, May 2023).
Label: Propaganda (Labelling & Name Calling, Loaded Language).

Evidence: Calling someone a fool and a fascist, idiot, extremist government, and has no competence indicate extreme labels. This kind of message is used to attack individuals or institutions by

using highly negative words. It makes public think about them negatively.

Tweet: *For his political capital? Was he ever in a situation to talk peace after Modi's unilateral action of abrogating Art: 370? Without even a simple majority? With military and PMLN breathing onto him? With PMLN blaming him for selling Kashmir?* (@MoeedNj, 2025, February 05).
Label: Propaganda (Doubt)

Evidence: In this tweet, multiple rhetorical questions are raised to cast doubt on the leader's intentions, competence, and pace. It creates suspicion in the mind of public about the competence and decisions of the leader.

Tweet: *The Indian Supreme Court has violated the international laws by giving a decision against the resolutions of the United Nations. Indian Supreme Court has betrayed the sacrifice of millions of Kashmiris. With this biased decision of the Indian Supreme Court, Kashmir's freedom movement will become stronger. There will be no abatement in the Kashmiri struggle. This decision will be seen as recognition of the blood of justice on the forehead of the Supreme Court of India. Under the leadership of Mian Nawaz Sharif, Muslim League N will raise the voice of the right of Kashmiris at all levels. We stand by our Kashmiri brothers and sisters in this struggle* (@CMShehbaz, 2023, November 12).

Label: Propaganda (Red Herring, Loaded Language)
Evidence: Instead of discussing the legal merits of the decision of the Supreme Court, the focus is shifted to the emotional and political narrative. The tweet contains phrases such as *betrayed the sacrifice of millions, blood of justice,* and *biased decision,* which indicate loaded language.

Tweet: *Following India's war hysteria, the Pakistan Armed Forces are on High Alert. Air, Ground, and Naval forces are all on High alert. India is using a false flag operation due to Modi's declining popularity. He needs to create an issue so everyone has to rally around him. It will backfire like before. The plot is weak, like a typical Bollywood film. Wars are exciting in movies only and suck in the real world. Hope sanity prevails (mubasherlucman, 2025, April 23).*

Label: Propaganda (Appeal for fear/harm, Whataboutism/red herring).
Evidence: The tweet displays a high alert for a war situation. Further, Modi's declining popularity is mentioned and blamed, shifting the focus from the incident to the alleged motives of a specific political leader.

Frequency of Propaganda Techniques

The study found that out of 18, 17 distinct propaganda techniques were present in the dataset. There was no tweet under the 'Straw Man' technique category. Furthermore, the majority of the tweets were multi-labelled as a single tweet may employ multiple techniques simultaneously. For example, a tweet with loaded language can co-occur with 'Name Calling' or 'Exaggeration'. Therefore, the results represent the percentage of propagandistic tweets that contain the techniques, and the total may exceed 100%. The following word count shows the most to least used propaganda techniques in the dataset.

Table 4: Frequency of Propaganda Techniques (N = 31,045)

Technique	Count (n)	% propagandistic tweets
Minimization or Exaggeration	13378	43.09
Doubt	9000	28.99
Appeal to Fear/Harm	6863	22.10
Loaded Language	5064	16.31
Labelling or Name-calling	2960	9.53
Flag-waving	2588	8.34
Repetition	2504	8.07
Bandwagon	1861	5.99
Call for Authorization	1498	4.83
Slogans	334	1.08
Red Herring	246	0.79
Whataboutism	210	0.68
Obfuscation, Intentional Vagueness, Confusion	120	0.39
Oversimplification of Causes	111	0.36
Fallacy of Black and White, Dictatorship	39	0.13
Reduction to Hitlerum (Guilt by Association)	34	0.11

Thinking-Terminating Cliché	31	0.10

The results reveal that the most frequent technique used in the social media warfare is minimization or exaggeration. It indicates that sometimes threats or accomplishments are overstated or the opponents' claims are downplayed to manipulate the audience and make them act accordingly. Moreover, the second most frequently used technique is Doubt. It depicts that a noticeable part of the selected discourse is based on raising questions on the credibility of the opponent to create uncertainty among audience. Appeal to fear is the third most used propaganda technique and it shows that thread-based framing strongly works to sway public opinion. In the same way, the techniques like loaded-language, name-calling, flag-waving, and repetition are deeply embedded in the regular communication to trigger hostility and hatred. They keep repeating the same words for the continuous reinforcement of their key messages.

Discussion

Findings of the study revealed an almost equal ratio of propagandistic and non-propagandistic tweets. There were 49.09% propagandistic and 50.91% non-propagandistic tweets in the dataset. This indicates that propaganda is not something to be noticed; rather, it is embedded in a daily routine, a normal form of communication.

The current study is conducted on the foundation of Ellul's 18 techniques of propaganda, and the findings of the study demonstrate the following percentage of the propaganda techniques used in the propagandistic tweets:

Minimization or Exaggeration: 43.09%
Doubt: 28.99%
Appeal to Fear/Harm: 22.11%
Loaded Language: 16.31%
Labelling/Name-calling: 9.53%
Flag-waving: 8.34%
Repetition: 8.07%

The ratios of the propaganda techniques indicate that propaganda works best when linked to emotions as these techniques have a strong connection with emotions. For example, *exaggeration* changes perceived scale, *doubt* affects credibility and certainty, *fear* or threat of *harm* increases the urgency of the action, and *loaded language* affects moral evaluation. Altogether, these techniques can sway people and make them react without even verifying the claim. According to Berger and Milkman

(2012) and Brady et al. (2017), content that is able to arouse emotions or evoke anger, fear, and anxiety spreads more quickly than others. Moreover, false and fake news spread on social media much more quickly than truth-based news or information since they are more impactful on human psychology.

The above-mentioned ratios answer the first research question of the study: What kinds of propaganda are commonly used in social media content between Pakistan and India? The results completely support the idea that propaganda is not an exception to use in times of crisis; rather, it is implicitly present in everyday communication. These findings align with the work of Woolley and Howard (2016), who state that propaganda can subtly influence through ordinary communication, and it is strategically practiced. Moreover, research by Da San Martino et al. (2020) also endorses this result by stating that propaganda is multi-layered, and a certain agenda can be conveyed through language design even when the message tends to be false or wrong. The findings also support the broader view in existing literature that most of the time propaganda is subtle, planned, tactful and practiced according to platform incentives.

Findings of the study revealed that propaganda is based on the roles of people and institutions. In the dataset, the percentage of propaganda was higher in army or defense forces-related twitter accounts, with a percentage of 75.47, followed by journalists with a percentage of 61.18. Politicians showed less propaganda than the other two classes. A logical reason behind this can be the fact that military accounts mostly communicate threat and defense-related frames, while journalists usually get involved in the game of blame and credibility. The difference in propaganda across professions is also witnessed across borders.

Indian propagandistic tweets were dominated by the military accounts, followed by journalistic accounts, whereas the case with Pakistan was different. Pakistani propagandistic tweets were dominated by politicians, followed by journalists. The military-affiliated accounts in Pakistan showed very little propaganda compared to the other two classes. In substantive terms, this implies that an Indian propaganda pattern is attached to a security or national defense narrative, while politicians drive the Pakistani propaganda pattern because they more frequently adopt propaganda-consistent framing.

Guess et al. (2019) stated that propaganda and fake news could be highly concentrated among a small fraction of users. This idea appears as a contrast to the current study but does not contradict the findings; rather, it gives a clearer perspective that a relatively small group of influential accounts can create highly impactful content on social media.

Conclusion

Since the current paper exhibits that the hostility between India and Pakistan has become massively digitalized, the social media network has turned into one of the main arenas of propagandistic communication. The analysis of 63239 tweets from politicians, journalists, and accounts of military personnel displays that almost half of the tweets distributed in the dataset are propagandistic, and clear patterns are observed depending on the profession and the borders of a country. The Indian army and journalistic reports were mostly prone to propaganda, whereas Pakistani propaganda was more evident among politicians and journalists. The paper also explains that propaganda is not merely determined by content, but it can also be identified through recurring propaganda techniques. It indicates that influential people actively participate in constructing and sharing strategic narratives, containing linguistic items that can trigger war-like feelings among the people. Moreover, there seem to be vivid differences in the use of propaganda among different professional groups. It signifies that institutional role shapes communication styles. In addition to that, findings reveal that the most frequently used propaganda techniques have been exaggeration, doubt, and fear appeals. Hence, it indicates people are manipulated by emotional discourse as these techniques are strongly connected to emotions, exaggeration and fear rather than factual communication. For example, *exaggeration* portrays a situation more dramatic or urgent; the use of *doubt* creates mistrust and uncertainty about a situation while *fear* appeals cause anxiety and trigger a sense of threat among people. When people encounter more emotionally charged messages, they immediately react without verifying the information.

In short, by classifying and analyzing tweets, the researchers have provided empirical insight into how social media communication is used to impact public opinion across professional groups and nations in the context of India and Pakistan. The current study is not devoid of limitations, i.e. the dataset is based on Twitter/X and selected accounts. This increases relevance to agenda setting, but it limits generalizability to the broader public.

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