Research Article

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Speech Acts in the Digital Sphere: A Corpus-Based Exploration of Interactional Dynamics on Social Media Platforms

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Abstract: This study was motivated by the need to understand the ways users perform speech acts on social media platforms, specifically Twitter, Facebook, and Instagram, and how these acts differ between public and private contexts. The purpose was to analyse the frequencies and types of speech acts (requests, apologies, and compliments) and identify the linguistic and pragmatic strategies employed. Using a mixed-methods research design, a corpus of 3 million posts was collected and analysed. Stratified random sampling ensured a balanced representation of speech acts, and both manual annotation and machine learning techniques were used for classification. Three major findings emerged: first, requests were significantly more frequent and direct in private messages than in public posts across all platforms; second, public apologies were more formal and detailed, while private apologies were concise and personal; third, Instagram had the highest frequency of compliments, with public posts being more explicit and enthusiastic compared to private messages. The study concluded that context and platform-specific features heavily influence communication strategies. These insights advance theoretical understanding and offer practical applications for optimizing social media communication.

Keywords: social media; speech acts; pragmatic strategies; public posts; private messages

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1 Introduction

In recent years, social media has revolutionized the way people communicate, interact, and share information. Platforms like Twitter, Facebook, and Instagram have become integral parts of daily life, influencing not only personal interactions but also business, politics, and culture (Kietzmann et al. 2011). Social media platforms offer unique features that shape communication styles and strategies. Twitter, with its 280-character limit, promotes brevity and immediacy (Page 2012). Facebook allows for more detailed posts and interactions within diverse social networks (Bouvier and Machin 2018), while Instagram emphasizes visual content and aesthetic presentation (Lee et al. 2015). Understanding how language is used on these platforms is crucial for insights into modern communication patterns and social dynamics (Zappavigna 2016).

The relationship between public posts and private messages on platforms like Twitter, Facebook, and Instagram is integral to understanding how speech acts are performed in different contexts. Each platform offers varying degrees of control over privacy settings, which influences the way users communicate. Twitter, for instance, by default, makes posts public, allowing anyone on the internet to see them, fostering more formal or performative communication. Facebook, however, provides more subtle privacy controls, enabling users to tailor their audience, which may lead to more personal and context-specific communication. Instagram, balancing between public and private, allows users to share visual content with either a broad audience or select individuals, impacting the nature of compliments or interactions. Studying the relationship between public posts and private messages is critical because these differences in platform affordances directly influence how users perform speech acts. This investigation ties into my research framework, emphasising why it is essential to explore both public and private communications across these platforms – public interactions tend to be more performative and formal, while private messages lean toward directness and intimacy. These distinctions help answer the research questions on how speech acts vary and what strategies are employed depending on the platform and communication context.

The significance of this study lies in its potential to advance both theoretical and practical knowledge. Theoretically, the research contributes to the fields of corpus linguistics and pragmatics by applying quantitative methods to analyse pragmatic phenomena in large datasets. This approach enables a better understanding of how speech acts function in contemporary digital communication. Practically, the findings can inform social media strategies for businesses, marketers, and influencers by emphasising effective communication practices tailored to specific platforms and contexts. For instance, businesses can optimize their customer

service interactions on Twitter by understanding the preferred linguistic strategies for requests and apologies. Similarly, social media influencers can enhance engagement on Instagram by leveraging effective complimenting techniques. Ultimately, the study provides valuable insights into the dynamic nature of language use in digital environments, reflecting broader social and cultural trends in communication

2 Literature Review

2.1 Pragmatics and Politeness Theory

Brown and Levinson's Politeness Theory, first introduced in their book *Politeness:* Some Universals in Language Usage (1987), is a seminal framework in the study of linguistic pragmatics. The theory is built on the premise that politeness is a universal feature of human interaction, rooted in the social need to mitigate facethreatening acts (FTAs). According to Brown and Levinson, "face" refers to an individual's self-esteem or emotional needs, which are categorized into "positive face" - the desire to be liked and admired - and "negative face" - the desire to be autonomous and free from imposition. Politeness strategies are employed to address these face needs, ensuring smooth social interactions and minimizing conflict. The theory outlines four main types of politeness strategies: bald on record (direct and unambiguous), positive politeness (enhancing the positive face), negative politeness (respecting the negative face), and off-record (indirect and ambiguous). These strategies are chosen based on the context, the relationship between the interlocutors, and the severity of the FTA (Brown and Levinson 1987).

Central to Brown and Levinson's theory is the concept of "face," which is influenced by Goffman's work on the presentation of self in everyday life (Goffman 1967). A face-threatening act (FTA) is any action that could potentially damage the face needs of either the speaker or the listener. For example, issuing a direct command ("Close the window") can threaten the listener's negative face by imposing on their autonomy, while criticizing someone can threaten their positive face. To mitigate the impact of FTAs, individuals use face-saving strategies. Positive politeness strategies might include compliments or expressions of solidarity to bolster the listener's positive face. Negative politeness strategies might involve hedging, apologies, or indirect language to respect the listener's desire for autonomy. For example, saying "Could you possibly close the window if you don't mind?" employs negative politeness to soften the imposition. Off-record strategies are even more indirect, allowing the listener to interpret the speaker's intention without explicitly stating it, thus providing the speaker with deniability and reducing the risk of face loss (Brown and Levinson 1987; Goffman 1967).

The relevance of politeness strategies extends into digital communication, where maintaining face is equally important, albeit in different contexts. Digital platforms often lack non-verbal cues, making the management of face and politeness even more critical to avoid misunderstandings. Studies have shown that users adapt traditional politeness strategies to fit the norms and constraints of digital media. For instance, in email and instant messaging, negative politeness strategies such as hedging and apologies are frequently used to mitigate the potential imposition of requests (Darics 2010). On social media platforms like Twitter and Facebook, users often employ positive politeness strategies such as likes, shares, and supportive comments to enhance their positive face and that of their interlocutors (Crystal 2011). The asynchronous nature of digital communication allows for more reflective and strategic use of language, giving users the opportunity to craft their messages carefully to maintain face and politeness. Moreover, the public or semi-public nature of many digital interactions means that face-saving strategies must account for a wider audience, not just the immediate interlocutor. This dynamic environment reveals the adaptability and continued relevance of Brown and Levinson's Politeness Theory in understanding and analyzing contemporary communication practices (Crystal 2011; Darics 2010).

2.2 Speech Acts in Digital Communication

Speech acts, originally conceptualized by Austin (1962) and later developed by Searle (1969), refer to the performative function of language, where utterances accomplish actions rather than merely convey information. In the context of digital communication, the performance of speech acts takes on new dimensions due to the unique features of online platforms, including asynchronous interactions, the absence of non-verbal cues, and the flexibility of digital discourse. This transformation has been the focus of internet pragmatics, a subfield of linguistics that explores how pragmatic principles apply in online environments (Xie and Yus 2018). Speech acts, such as requests, apologies, promises, and greetings, are fundamental to every-day communication, both offline and online, though their execution in digital media requires an understanding of platform-specific affordances.

In digital communication, the asynchronous nature of many platforms like emails, forums, or social media threads allows users to perform speech acts in contexts where immediate feedback is not required. This shifts the dynamics of interaction, as seen in research by Herring (2013), where online requests are often crafted with greater attention to clarity and politeness due to the lack of immediate correction. Without real-time cues like facial expressions or intonation, online communicators tend to use compensatory strategies, such as emoji, punctuation, and paralinguistic markers to express illocutionary force – the intended meaning behind an utterance (Dresner and Herring 2010). For example, a smiley face or an

exclamation point can reinforce the politeness of a request or soften a directive, thereby achieving a level of interpersonal sensitivity that would otherwise rely on tone in face-to-face interactions.

Moreover, platforms like Twitter, WhatsApp, and Facebook have encouraged the emergence of new genres of speech acts. According to Yus (2019), these platforms allow for a blending of performative acts where users simultaneously inform, entertain, and persuade their audience, thus broadening the scope of traditional speech act categories. Hashtags, for instance, function as both declaratives and directives in some contexts, signaling solidarity with a cause (e.g., #MeToo) while also encouraging others to engage with the discourse. Similarly, the act of sharing content - whether retweets or shared posts - can be viewed as a form of endorsement, akin to the performative act of making a promise or commitment. This blending of functions exemplifies how speech acts in digital communication are often multimodal, drawing on visual, textual, and sometimes audio elements to convey illocutionary intent (Searle 1975). The digital space thus reconfigures how speech acts are conceptualized, offering a flexible environment where traditional categories are expanded and reinterpreted.

In essence, the performance of speech acts in digital communication is shaped by the characteristics of online platforms, the tools available to users, and the evolving nature of online discourse. While traditional speech act theory offers a foundational understanding of performative language, digital communication adds challenges to this process by introducing asynchronous communication, the absence of non-verbal cues, and the integration of multimodal resources. Research continues to investigate how these dynamics affect the way individuals perform speech acts online, particularly in terms of politeness strategies, illocutionary force, and the blending of speech act categories. As the field of internet pragmatics grows, it will be crucial to explore how emerging technologies further transform speech act performance in digital environments, where language and action increasingly intersect in dynamic ways.

2.3 Corpus-Based Methods for Analyzing Speech Acts: A **Pragmatic Approach**

Corpus-based methods offer an empirical approach to analyzing speech acts by utilizing large, structured collections of authentic language data. A corpus is essentially a database of text, spoken language transcriptions, or other linguistic material that has been systematically collected to represent a particular type of language use (McEnery and Hardie 2012; McEnery, Xiao and Tono 2006). Corpus analysis tools enable researchers to extract patterns and frequencies of specific speech acts, such as apologies, requests, promises, and compliments, across different communicative

contexts. This approach moves beyond traditional, introspective methods by providing a quantitative and qualitative analysis of speech acts in real-world communication (Jucker and Taavitsainen 2008). The use of corpora allows researchers to analyse large volumes of data efficiently, making it possible to uncover trends and variations in speech act performance across different demographic groups, cultures, and languages.

One of the most widely used corpus-based methods for analyzing speech acts involves the identification and tagging of speech acts within a corpus. To do this, researchers often rely on pragmatic annotation schemes, which involve labeling instances of speech acts based on their illocutionary force (Biber, Conrad, and Reppen 1999). For example, in a study of apologies in English, a researcher might tag sentences containing apology markers like "sorry" or "apologize" and analyse how frequently these speech acts occur in different settings, such as formal emails versus casual text messages. Some corpora, such as the British National Corpus (BNC) or the Corpus of Contemporary American English (COCA), have already been pragmatically annotated, which makes it easier for researchers to extract relevant data for speech act analysis. However, when dealing with untagged corpora, researchers may need to develop their own annotation schemes or rely on automatic tagging tools, though these methods require validation to ensure accuracy (Trosborg 1995).

Another key corpus-based method for speech act analysis is the examination of contextual features that influence the performance of speech acts. This involves analyzing linguistic and extralinguistic factors such as politeness strategies, power relations, and cultural norms that affect how speech acts are realized in various contexts (Leech 1993, 2014). For instance, a study using a corpus of customer service interactions might reveal that requests are often softened with politeness markers in high-stakes interactions, whereas more direct requests may be used in informal settings. Analyzing speech acts across different registers and genres allows researchers to explore how contextual variables influence language use. Corpus-based studies of speech acts can also be extended to cross-cultural comparisons, where different corpora are used to analyse how specific speech acts, such as compliments or refusals, are performed in various languages or cultural contexts (Culpeper and Haugh 2014; Culpeper, Haugh, and Kádár, 2017). Such studies can reveal important insights into the pragmatics of intercultural communication, emphasising both universal and culturally specific features of speech act performance.

In a nutshell, corpus-based methods provide a valuable framework for analyzing speech acts by leveraging large datasets and computational tools to uncover patterns of pragmatic language use. Through pragmatic annotation, frequency analysis, and the examination of contextual factors, researchers can gain a better

understanding of how speech acts are performed in different communicative settings. This approach not only allows for the exploration of speech acts in naturalistic language use but also facilitates cross-linguistic and cross-cultural comparisons. As corpora continue to evolve with advances in technology, the potential for more sophisticated speech act analysis grows, offering new opportunities for researchers in the fields of pragmatics and sociolinguistics.

2.4 Digital Communication and Social Media Linguistics

Digital communication, characterized by the exchange of information through digital devices and platforms, has distinct features that set it apart from traditional forms of communication. One of the primary characteristics is its asynchronous nature, allowing individuals to communicate without the need for real-time interaction. This enables users to reflect and craft their responses, unlike face-to-face conversations that require immediate replies (Crystal 2011). Digital communication also facilitates multimodal interactions, incorporating text, images, videos, and hyperlinks, which enhance the richness and versatility of the conveyed messages (Herring 2013). Another defining trait is the potential for anonymity and pseudonymity, which can influence how people present themselves and interact with others (Donath 1999). Moreover, digital platforms support a global reach, enabling communication across geographical boundaries and time zones, fostering a more interconnected world (Baron 2008). These features collectively contribute to the unique dynamics of digital communication, shaping how individuals convey and interpret messages in online environments.

There are several notable differences between digital and traditional communication, impacting how messages are created, shared, and perceived. Traditional communication, such as face-to-face conversations, letters, and telephone calls, typically involves synchronous exchanges, where participants are engaged in real-time interaction (Thurlow, Lengel, and Tomic 2004). In contrast, digital communication often allows for asynchronous interaction, providing users with the flexibility to respond at their convenience (Crystal 2011). This can lead to differences in the immediacy and spontaneity of the exchanges. Additionally, digital communication often lacks the non-verbal cues present in face-to-face interactions, such as gestures, facial expressions, and tone of voice, which can lead to misunderstandings or the need for explicit clarification (Walther 1996). Another difference lies in the permanence and retrievability of digital messages; while spoken words in traditional communication are ephemeral, digital messages can be archived and retrieved, providing a lasting record of the interaction (Baron 2008). Furthermore, digital communication often involves a broader audience due to the public or semi-public nature of social media platforms, compared to the more private and controlled audience of traditional communication forms (Herring 2013). These

differences emphasise the distinct challenges and opportunities presented by digital communication.

Each social media platform has developed its own linguistic features and norms, influenced by the platform's design and user community. Twitter, for instance, is known for its brevity due to the 280-character limit, which encourages users to be concise and often leads to the use of abbreviations, acronyms, and hashtags to convey more information in limited space (Zappavigna 2012). The hashtag, in particular, serves as a tool for categorization and trend tracking, allowing users to participate in broader conversations (Page 2012). Facebook, on the other hand, allows for longer posts and supports a wide range of multimedia content, fostering a more narrative and detailed style of communication (Bouvier and Machin 2018). Users often engage in dialogues through comments and replies, creating threaded conversations that can span significant lengths and cover challenging topics. Instagram emphasizes visual content, with images and videos being the primary mode of communication (Lee et al. 2015). Captions on Instagram tend to be descriptive or emotive, often supplemented with hashtags to enhance discoverability and engagement. The platform's emphasis on aesthetics and personal branding influences the language style, encouraging a more curated and polished presentation (Zappavigna 2016). These linguistic features reflect how each platform's unique characteristics shape the way users communicate and interact online.

2.5 Public versus Private Communication on Social Media

Public posts and private messages on social media represent two distinct modes of communication, each with unique characteristics and implications for language use. Public posts are visible to a broader audience, often including friends, followers, and sometimes the general public, depending on privacy settings. These posts are typically found on users' profiles, public pages, and in comment sections, and they can be shared and reshared, increasing their reach and longevity (Marwick and Boyd 2011). The content of public posts is often crafted with a wider audience in mind, leading to more polished and carefully considered language, as users are aware of the potential for their words to be seen and judged by many (Tagg 2015). In contrast, private messages are direct communications between specific individuals or small groups, typically exchanged through direct messaging features on platforms like Facebook Messenger, Instagram Direct, and Twitter DMs. These messages are intended for a more restricted audience, allowing for more casual, intimate, and spontaneous exchanges (Bazarova and Choi 2014). The language used in private messages tends to be less formal and more reflective of personal relationships and immediacy, often including slang, abbreviations, and emoticons (Georgakopoulou 2011).

The audience and context significantly influence language use in digital communication, as users tailor their language to fit the expectations and norms of their intended recipients. In public posts, where the audience is larger and more diverse, users often adopt a more formal tone and employ strategies to manage their selfpresentation and maintain a positive online persona (Androutsopoulos 2014). This can include the use of polite language, hedging, and humor to appeal to a wide audience and mitigate potential criticism (Marwick and Boyd 2011). The context of public communication also encourages the use of hashtags and tagging to increase visibility and engagement with broader communities and trends (Page 2012). Conversely, in private messages, the audience is limited to known individuals, which allows for a more relaxed and informal style of communication (Walther 2011). The context of these interactions is typically more personal and immediate, leading to the use of inside jokes, personal references, and a greater degree of emotional expression (Bazarova 2012). The distinction between public and private communication on social media reveals the adaptability of language use, as individuals explore different social contexts and audience expectations.

Research comparing public and private communication on social media has revealed notable differences in language use and interaction patterns. For instance, Tagg (2015) conducted a study examining Facebook status updates (public posts) and private messages, finding that public posts were more likely to contain polished, carefully constructed narratives, whereas private messages were characterized by spontaneity and informality. Similarly, Bazarova and Choi (2014) found that selfdisclosure in private messages was more intimate and detailed compared to public posts, where users were more guarded and selective in the information they shared. These studies emphasise the impact of audience size and perceived privacy on the depth and nature of self-disclosure. Moreover, Page (2012) explored the use of hashtags and tagging in public posts, noting that these features serve as tools for visibility and engagement, facilitating connections with broader communities and trending topics. In contrast, private messages lacked such mechanisms, focusing instead on direct and personal interaction. The comparative analysis of public and private communication on social media demonstrates how the context and audience shape linguistic choices, revealing the dynamic nature of digital communication.

2.6 Platform-Specific Communication Styles: Twitter, Facebook, and Instagram

Twitter, Facebook, and Instagram each offer unique features that shape their users' communication styles. Twitter is characterized by its brevity, with a 280-character limit per tweet, which encourages concise and often informal language (Zappavigna 2012). Users frequently employ hashtags to categorize content and engage in

trending topics, fostering a culture of rapid and widespread information dissemination (Page 2012). The platform's structure supports real-time updates and public conversations, allowing tweets to be easily retweeted and replied to, amplifying interactions across a large audience.

Facebook, in contrast, provides a more versatile communication environment with options for longer text posts, photo sharing, and video content. The platform's features, such as status updates, comments, and groups, facilitate more elaborate and varied interactions (Bouvier and Machin 2018). Users can engage in indepth discussions, share personal updates, and participate in community-based dialogues, which are often more contextually rich and detailed compared to Twitter's succinct posts. The integration of reactions, tagging, and shared content further enhances interactive possibilities.

Instagram focuses primarily on visual communication, with photos and videos as the main content forms. The platform encourages the use of visual aesthetics to communicate messages and personal branding (Lee et al. 2015). Captions accompanying images often serve to provide context or express personal sentiments, while hashtags help in content discovery and engagement with broader trends (Zappavigna 2016). The visual-centric design of Instagram supports a style of communication that prioritizes image over text, shaping how users present and interact with content.

2.7 How Platform Design Influences Language and Interaction

The design of each social media platform significantly influences how language is used and interactions are structured. Twitter's character limit necessitates brevity, which often results in abbreviated language, use of emojis, and creative formatting to convey messages effectively within a restricted space (Zappavigna 2012). The platform's emphasis on hashtags and trending topics encourages users to engage with current events and popular discussions, often leading to a more dynamic and participatory communication style (Page 2012). The public nature of tweets also means that interactions are often more open and accessible, contributing to a conversational and sometimes confrontational tone.

In contrast, Facebook's design supports more extensive and varied interactions due to its capability to handle longer text posts and multimedia content. The platform's features like comments, likes, and shares facilitate continuous dialogue and feedback, enabling users to engage in better conversations and build more comprehensive narratives (Bouvier and Machin 2018). The ability to create and participate in groups and events further supports community-building and targeted interactions, allowing for more personalized and contextually rich communication (Kietzmann et al. 2011).

Instagram's visual-centric design influences communication by prioritizing imagery over text, which affects both content creation and interaction (Lee et al. 2015). The platform's design encourages users to present themselves through curated images and videos, often accompanied by brief and impactful captions (Zappavigna 2016). This emphasis on visual storytelling shapes how users interact, with likes and comments serving as primary forms of engagement. The platform's design fosters a more aesthetic-driven and less text-heavy style of communication, reflecting the importance of visual appeal and personal branding in user interactions.

2.8 Existing Research on Communication Practices Unique to **Each Platform**

Research has explored the distinct communication practices that arise on Twitter, Facebook, and Instagram, emphasising how each platform's design influences user behavior and language use. Studies on Twitter have examined the impact of the character limit on language efficiency and creativity, noting how users adapt their language to fit within the constraints while maximizing impact (Zappavigna 2012). The research also reveals how hashtags facilitate community engagement and discourse around trending topics, contributing to a culture of rapid information sharing (Page 2012).

Facebook research has focused on the platform's role in fostering extended social networks and in-depth interactions. Studies have analysed how users employ the platform's features to maintain relationships, share detailed personal updates, and engage in community-based discussions (Bouvier and Machin 2018). The platform's ability to integrate various forms of content allows for diverse communication styles, from personal storytelling to professional networking.

On Instagram, research has emphasized the role of visual content in shaping communication practices. Studies have investigated how users curate their profiles to reflect personal brand and aesthetic preferences, with captions and hashtags enhancing the visibility and context of visual posts (Lee et al. 2015; Zappavigna 2016). The platform's focus on imagery influences both content creation and interaction patterns, contributing to a unique style of communication centered around visual expression.

Despite the widespread use of social media, research exploring the intersection of corpus linguistics and pragmatics within these digital contexts remains limited, with most studies focusing on general language use or specific aspects like sentiment analysis and hashtag trends (Androutsopoulos 2014; Giachanou and Crestani 2016; Herring and Androutsopoulos 2015; Pak and Paroubek 2010; Wang and Zhuang 2017). The nuanced ways users perform speech acts – such as making requests, offering apologies, and giving compliments - across different platforms are

underexplored, as is the impact of public versus private communication on language use. Addressing this gap, the study investigates the frequencies, types, and pragmatic strategies of speech acts on Twitter, Facebook, and Instagram, guided by two research questions: how the frequencies and types of speech acts vary across these platforms and what linguistic and pragmatic strategies are used in public posts versus private messages.

3 Methodology

3.1 Research Design

This study employed a mixed-methods research design, combining quantitative corpus analysis with qualitative linguistic analysis to examine speech acts on Twitter, Facebook, and Instagram.

3.2 Data Collection and Sampling Procedure

A stratified random sampling technique was used to select posts, ensuring an equal representation of each speech act category (requests, apologies, and compliments) across platforms. The selection criteria focused on posts written in English to maintain consistency in linguistic analysis. The corpus used in this study consisted of a total of 3 million posts, with each of the three platforms – Twitter, Facebook, and Instagram – contributing 1 million posts each. These 1 million posts per platform were further divided into two categories: 750,000 public posts and 250,000 private messages. The composition was designed to ensure a more accurate representation of both public and private communication on each platform. This stratified approach allowed for an equal focus on public posts, which are accessible to a wider audience, and private messages, which offer more personal and direct interactions. Thus, the study incorporated 2.25 million public posts and 750,000 private messages, ensuring a balanced representation of public and private discourse.

It is indeed more challenging to collect private messages due to privacy concerns and restricted access. To address this, private messages were gathered with the informed consent of the participants involved in the study. A call for voluntary participation was made, targeting diverse user groups to minimize biases related to individual usage patterns. The participants were informed of the study's objectives, and anonymization techniques were applied to protect their privacy. Additionally, participants were asked to submit private conversations that were purely text-based (i.e., not involving multimedia) to ensure consistency in analysis. The data collection process was conducted in compliance with ethical guidelines,

ensuring that no personally identifiable information (PII) was included in the final dataset.

To further ensure diversity in data, participants were selected from different geographical locations, cultural backgrounds, and social demographics. This approach minimized bias stemming from individual language use or the overrepresentation of certain user behaviours. Through this method, a more representative corpus of private messages was created, contributing to a well-rounded analysis of speech acts across various social media platforms.

3.3 Indices for the Machine Learning Models Used

We manually annotated a subset of 10,000 posts from each platform to identify and classify speech acts. After manually annotating the subset, the classification of speech acts was extended to the entire dataset using machine learning methods. Specifically, Support Vector Machine (SVM) and Bidirectional Encoder Representations from Transformers (BERT) were employed for the classification process. SVM was chosen for its effectiveness in handling high-dimensional data, as it works well with text classification tasks. BERT, a state-of-the-art transformer model, was utilized for its good contextual understanding of language, allowing for more accurate classification of speech acts based on context. These methods were complemented by pre-processing steps like tokenization, stemming, and removal of stop words to enhance model performance. The SVM model achieved an accuracy of 87 % on the annotated subset, with F1-scores of 84 % for requests, 81 % for apologies, and 89 % for compliments. The BERT model demonstrated a slightly higher accuracy of 92 %, with F1-scores of 90 % for requests, 88 % for apologies, and 93 % for compliments. This approach ensures that the overall performance metrics are clearly presented and integrate both precision and recall. These indices demonstrate the robustness and reliability of the models used in classifying speech acts across the entire corpus, ensuring consistent and valid results for the larger dataset.

3.4 Data Analysis Procedure

Chi-square tests were then used to determine whether the differences in the distribution of speech acts between platforms and contexts (public vs. private) were statistically significant. In addition to this, qualitative analysis was performed to explore the linguistic and pragmatic strategies users employed when performing these speech acts. Statistical analyses were carried out using R, ensuring accurate identification of significant differences between platforms and contexts. Together, these methods provided a comprehensive framework for understanding the challenging dynamics of speech acts in digital communication.

4 Results

4.1 Research Question One

How do the frequencies and types of speech acts (e.g., requests, apologies, compliments) vary across different social media platforms such as Twitter, Facebook, and Instagram?

4.2 Frequencies of Speech Acts Across the Three Platforms

The following table summarizes the frequencies of the speech acts across the three platforms:

4.3 Analysis of Requests

Table 1 shows that requests were most common on Instagram, accounting for 153,000 interactions (15.3 %), followed by Twitter with 125,000 interactions (12.5 %), and Facebook with 89,000 interactions (8.9 %). This pattern indicates that Instagram users are more inclined to make requests, likely due to the platform's visual nature, which encourages users to share personal experiences and seek input from others. For instance, users may post inquiries like, "Can anyone recommend a good restaurant in this area?" alongside appealing images that draw attention. This engagement can be attributed to the platform's emphasis on sharing personal experiences and seeking advice from others, enhancing community interactions.

In terms of linguistic features, qualitative analysis showcases notable variations in how requests are articulated across platforms. Twitter, with its character limit, encourages users to adopt concise and direct phrasing when making requests. An example might be, "Need a ride to the airport. Anyone available?" This succinctness reflects the platform's fast-paced nature, where brevity is essential. Conversely, Facebook requests tend to be more elaborate and contextualized. Users often provide additional background information to frame their requests better, such as, "I'm planning a surprise party for my brother next weekend. Any suggestions for a good

Table 1: Frequency of speech acts across social media platforms.

Platform	Requests (count, %)	Apologies (count, %)	Compliments (count, %)
Twitter	125,000 (12.5 %)	37,000 (3.7 %)	62,000 (6.2 %)
Facebook	89,000 (8.9 %)	51,000 (5.1 %)	104,000 (10.4 %)
Instagram	153,000 (15.3 %)	24,000 (2.4 %)	148,000 (14.8 %)

venue?" Instagram requests, on the other hand, frequently incorporate hashtags and emphasize visual elements. A user might post, "Looking for outfit ideas for a wedding. #fashionadvice," linking their request to both the image and the hashtag, creating a more engaging appeal for responses. This analysis illustrates how the platform's characteristics shape the formulation and expression of requests, emphasizing the need for contextual understanding in digital communication.

4.4 Analysis of Apologies

Table 1 indicates that apologies were the least frequent on Instagram, constituting only 24,000 interactions (2.4%), while Facebook had the highest frequency at 51,000 interactions (5.1%). Twitter had an intermediate rate with 37,000 interactions (3.7%). This pattern suggests that Facebook users may feel more inclined to apologize due to the platform's more personal and intimate nature, where interactions tend to be closer and more emotionally charged. The higher frequency of apologies on Facebook may reflect social norms that encourage users to address misunderstandings or mistakes more openly, aligning with the platform's emphasis on building and maintaining relationships.

Linguistically, apologies on Twitter are often brief and somewhat informal due to the platform's character constraints. An example might be, "Sorry for the late reply!" This brevity can sometimes lead to a lack of depth in emotional expression. In contrast, Facebook users typically provide more detailed apologies, often including justifications or explanations. A user might write, "I'm really sorry I missed your call yesterday. I was swamped with work," This approach reflects an effort to maintain personal connections and accountability in interactions. On Instagram, apologies are often visually contextualized, with accompanying images that can enhance the message. For instance, a user might share a photo of a missed event with a caption like, "Sorry I couldn't make it!" This combination of visual and textual elements adds a layer of sincerity and relatability to the apology, indicating that the platform's visual nature influences how users express regret and seek forgiveness.

4.5 Analysis of Compliments

Table 1 shows that Instagram users express compliments most frequently, with 148,000 interactions (14.8 %), followed by Facebook at 104,000 interactions (10.4 %), and Twitter at 62,000 interactions (6.2 %). The high rate of compliments on Instagram aligns with the platform's focus on visual content and personal expression, where users are motivated to celebrate and acknowledge others' achievements or aesthetics. This behaviour is often driven by visually appealing posts, fostering an environment where compliments are readily shared. For example, a user might comment on an image, "Your new haircut looks amazing! #style," illustrating how compliments are often tied to the accompanying visual content.

When examining the linguistic features of compliments across platforms, Instagram stands out for its visual-centric approach. Compliments are frequently linked to images or videos, creating a strong connection between the compliment and the content being praised. On Facebook, compliments tend to be more verbal and context-specific, such as, "Congratulations on your promotion! You deserve it!" This approach reflects a more personalized and narrative-driven interaction style. Twitter, however, presents compliments in a more succinct manner, often embedded within retweets or replies. An example could be, "Great job on your presentation!" This brevity aligns with Twitter's fast-paced environment, where users aim to convey their sentiments quickly. Thus, these findings demonstrate how the platform-specific characteristics shape the frequency and linguistic features of compliments, underscoring the diverse ways users communicate appreciation and affirmation in digital contexts.

In a nutshell, the comparative analysis of requests, apologies, and compliments across Twitter, Facebook, and Instagram reveals significant differences in user behavior and linguistic expression. These variations are shaped by the distinct characteristics of each platform, influencing how users engage in speech acts and explore social interactions. Understanding these dynamics is essential for appreciating the dynamics of digital communication in contemporary social media environments.

4.6 Cross-Platform Comparisons

To better understand the variations in speech acts across platforms, we performed a chi-square test of independence. The results showed a significant difference in the distribution of speech acts among the three platforms ($\chi^2 = 48.9$, p < 0.001).

Table 2 confirms that the differences in speech act frequencies across platforms are statistically significant. Instagram's higher frequencies of requests and compliments align with its visual and interactive nature, while Facebook's more

Table 2: Chi-square test resul	its for speech act distribution.

Speech act	Twitter (%)	Facebook (%)	Instagram (%)	χ^2 value	p Value
Requests	12.5	8.9	15.3	15.1	< 0.001
Apologies	3.7	5.1	2.4	10.3	< 0.01
Compliments	6.2	10.4	14.8	23.5	< 0.001

balanced distribution of speech acts reflects its role as a medium for more extensive personal interactions. Twitter's brevity impacts the frequency and nature of speech acts performed there. Understanding how speech acts vary across social media platforms can inform strategies for effective communication. For instance, businesses and social media influencers can tailor their engagement strategies to fit the dominant speech acts on each platform. Customer service interactions on Twitter might focus on concise responses, while Facebook could be leveraged for more detailed customer support and relationship building (Tables 3-6).

4.7 Research Question Two

What are the linguistic and pragmatic strategies used to perform speech acts in social media communication, and how do these strategies differ between public posts and private messages?

Table 3: Frequency of requests in public posts versus private messages.

Platform	Public posts (%)	Private messages (%)
Twitter	7.4	18.2
Facebook	5.3	12.5
Instagram	8.9	21.7

Table 4: Frequency of apologies in public posts versus private messages.

Platform	Public posts (%)	Private messages (%)
Twitter	1.9	5.5
Facebook	3.4	8.2
Instagram	1.5	4.7

Table 5: Frequency of compliments in public posts versus private messages.

Platform	Public posts (%)	Private messages (%)
Twitter	4.8	7.6
Facebook	9.2	14.5
Instagram	11.3	16.4

Speech act	Platform	Public posts	Private messages	t value	p value
Requests	Twitter	7.4	18.2	8.4	<0.001
•	Facebook	5.3	12.5	7.1	< 0.001
	Instagram	8.9	21.7	9.2	< 0.001
Apologies	Twitter	1.9	5.5	6.5	< 0.01
	Facebook	3.4	8.2	7.8	< 0.01
	Instagram	1.5	4.7	5.9	< 0.01
Compliments	Twitter	4.8	7.6	5.2	< 0.05
	Facebook	9.2	14.5	6.7	< 0.01
	Instagram	11.3	16.4	8.1	< 0.01

Table 6: *t*-test results for speech act strategies in public posts versus private messages.

4.8 Requests

4.8.1 Frequency and Distribution

Table 3 shows the distribution of requests in public posts versus private messages across the three platforms:

4.8.2 Linguistic Strategies

- Directness: Requests in private messages were generally more direct across all
 platforms compared to public posts. For example, on Twitter, a public request
 might read, "Does anyone know a good mechanic?" while a private message
 might state, "Can you recommend a mechanic?"
- Politeness Markers: Public requests frequently included politeness markers such as "please" and "could you," likely due to the broader audience. Private requests were less formal but often contained mitigating language (e.g., "Hey, if it's not too much trouble, can you ... ").
- Modality: Requests in public posts tended to use modal verbs to soften the imposition (e.g., "Could you possibly ... ?"), whereas private messages were more straightforward (e.g., "Can you ... ?").

4.9 Apologies

4.9.1 Frequency and Distribution

Table 4 shows the distribution of apologies in public posts versus private messages:

4.9.2 Linguistic Strategies

- Formality: Apologies in public posts were more formal and structured, often
 including an explanation or acknowledgment of responsibility (e.g., "I apologize for any inconvenience caused. It was an oversight on my part."). In private
 messages, apologies were more informal and concise (e.g., "Sorry about that!").
- Politeness Strategies: Public apologies commonly utilized politeness strategies such as hedging (e.g., "I might have missed your message, sorry!") and expressing regret (e.g., "I'm really sorry for the trouble."). Private messages, while still polite, often included personal touches or reassurances (e.g., "Sorry I missed your call. I'll make it up to you.").
- Reparative Actions: Public apologies frequently mentioned reparative actions
 to address the issue (e.g., "I will ensure this doesn't happen again."), while private apologies were more likely to include immediate, specific remedies (e.g.,
 "I'll call you back in 10 min").

4.10 Compliments

4.10.1 Frequency and Distribution

Table 5 shows the distribution of compliments in public posts versus private messages:

4.10.2 Linguistic Strategies

- Explicitness: Compliments in public posts were often explicit and aimed at a broad audience, enhancing social bonding (e.g., "Great job on your presentation! Everyone loved it!"). Private compliments, while explicit, were more personalized (e.g., "You were fantastic in your presentation today!").
- Intensity: Public compliments tended to use stronger, more enthusiastic language to create a positive public image (e.g., "Absolutely amazing work! You're incredible!"). Private compliments were sincere but less exaggerated (e.g., "Really liked what you did with that project.").
- Accompanying Features: On Instagram, public compliments were frequently accompanied by visual elements such as emojis, likes, and tags (e.g., "X You're a star! @username"), whereas private compliments might include photos or references to shared experiences (e.g., "Loved your new painting! The colors are stunning.").

4.10.3 Cross-Platform Comparisons

To examine the differences in speech act strategies between public posts and private messages, we conducted a series of t-tests. The results showed significant differences in the use of directness, politeness markers, and modality across the platforms (p < 0.05 for all comparisons).

Table 6 reveals distinct differences in how speech acts are performed in public versus private contexts across social media platforms.

- Requests: Users are more direct in private messages, likely due to the expectation of a prompt and personal response. In public posts, the use of politeness markers and modal verbs suggests a desire to mitigate imposition and maintain a positive public image.
- 2. **Apologies**: Public apologies tend to be more formal and include reparative actions, reflecting a broader audience's scrutiny. Private apologies are more personal and immediate, focusing on direct communication and resolution.
- Compliments: Public compliments are more explicit and enthusiastic, enhancing the social standing of both the giver and receiver. In contrast, private compliments are more personalized and sincere, often referencing shared experiences.

These findings reveal the importance of context in shaping linguistic and pragmatic strategies on social media. The differences between public and private communication emphasise how users adapt their language to fit the medium and audience. For social media marketers, understanding these distinctions can inform targeted communication strategies. Public posts can be crafted to maximize engagement and positive sentiment, while private messages can focus on personalized customer interactions and problem resolution. For individual users, recognizing these patterns can enhance effective communication and relationship building on social media platforms.

4.10.4 Discussion of Findings

The analysis of speech acts across Twitter, Facebook, and Instagram reveals significant insights into the linguistic and pragmatic strategies employed by users in public posts versus private messages. These findings align with Brown and Levinson's Politeness Theory, which posits that speakers explore social interactions by balancing the need to assert their desires (negative face) with the need to respect others' autonomy (positive face) (Brown and Levinson 1987). Our results indicate that requests are notably more frequent in private messages, a pattern that aligns with the expectation of a personal and direct response in such communications.

This trend suggests that users perceive private messages as a more suitable medium for making requests, allowing for a direct approach that minimizes the perceived threat to the addressee's face (Bach and Harnish 1979a, 1979b). In contrast, public posts demonstrate a tendency towards indirect language and the inclusion of politeness markers. This reflects a conscious effort to mitigate potential impositions on a broader audience while maintaining social decorum, consistent with Brown and Levinson's emphasis on face-saving strategies in public discourse.

In the context of apologies, our findings show a similar pattern: these acts are less frequent overall but more common in private messages. The necessity for more frequent apologies in private settings suggests that users feel a greater obligation to address interpersonal dynamics directly. This aligns with Brown and Levinson's assertion that speakers are more likely to use politeness strategies in contexts where they perceive a higher risk of face-threatening acts (FTAs) (Brown and Levinson 1987). Public apologies, on the other hand, are generally more formal and structured, often accompanied by explanations or acknowledgments of responsibility. This formality serves a dual purpose: it maintains a positive public image and addresses the scrutiny of a wider audience. On Twitter, apologies are brief yet strive for sincerity, fitting within the platform's character constraints, whereas Facebook allows for more elaborate apologies that include justifications, reflecting its personal and interactive nature. Instagram's apologies, although less frequent, often complement visual elements, which aligns with the platform's emphasis on visual content and enhances the impact of the apology (Walther, Wang, and Feng 2010).

Compliments present a different dynamic, with the highest frequency observed on Instagram, followed by Facebook and Twitter. This trend is consistent with the platform's focus on visual content and personal expression, where compliments serve to enhance social bonding and public recognition. Brown and Levinson's theory reveals that public compliments are generally more explicit and enthusiastic, as they function to bolster the speaker's positive face while reinforcing social connections (Brown and Levinson 1987). In contrast, private compliments are typically more personalized and sincere, often referencing shared experiences that strengthen interpersonal relationships. Instagram users frequently enhance their compliments with visual elements, such as emojis and tags, which amplify positive sentiment and visibility. Facebook compliments, while still expressive, tend to be more context-specific, focusing on personal milestones or achievements. Twitter, with its character limitations, fosters succinct compliments, often embedded in retweets or replies, utilizing the platform's interactive features to extend the compliment's reach (Derks, Fischer, and Serino 2008).

The statistical analysis of speech acts reveals significant differences in the use of directness, politeness markers, and modality across platforms and contexts.

These findings reveal the importance of context in shaping linguistic and pragmatic strategies. Public posts are crafted to maintain social decorum, manage face, and engage a broad audience, while private messages prioritize direct and personal communication, enhancing clarity and immediacy (Holtgraves 2002). The differences observed in our study echo previous research indicating that the context of communication heavily influences the strategies employed by speakers (Kadar and Haugh 2013). For instance, prior studies have shown that social media users adapt their language to align with the expected norms of each platform, demonstrating a subtle understanding of audience and context (Wang, Wang, and Hu 2017).

From a practical standpoint, these findings provide essential insights for social media marketers and influencers. Public posts should leverage explicit compliments, formal apologies, and indirect requests to maximize engagement and maintain a favorable public image. Conversely, private messages can employ more direct and personalized language to foster stronger relationships and ensure effective customer support. Understanding the linguistic elements across different platforms can significantly enhance communication strategies, ultimately leading to improved user engagement and satisfaction (Kaplan and Haenlein 2010). The theoretical implications of this study contribute to our understanding of how context influences pragmatic strategies in digital communication, affirming existing theories of politeness and face management while emphasising the role of platform-specific features in shaping communication practices.

Future research could further explore the evolution of these communication strategies over time as social media usage patterns shift. Investigating additional speech acts and their variations across diverse cultural and linguistic contexts would enrich our understanding of global communication practices on social media. Moreover, extending the analysis to include non-English-speaking contexts and cross-cultural comparisons could reveal significant insights into how politeness strategies are adapted and manifested across different cultures (House 1996). Thus, this study reveals the dynamics of social media communication, illustrating how users explore the delicate balance of asserting their needs while maintaining respect for others' face, reflecting the ongoing relevance of Brown and Levinson's Politeness Theory in contemporary digital discourse.

5 Conclusions

This study provides a comprehensive analysis of how linguistic and pragmatic strategies vary in performing speech acts across public posts and private messages on Twitter, Facebook, and Instagram. Our findings demonstrate that users adapt their communication styles to fit the context of the platform and the nature of the interaction. Requests are more frequent and direct in private messages, reflecting

the expectation of personal response, while public requests incorporate more politeness markers to mitigate imposition. Apologies in public posts are formal and detailed, aiming to maintain a positive public image, whereas private apologies are concise and personal. Compliments are abundant on Instagram, leveraging the platform's visual elements to enhance positive social interactions, with public compliments being more enthusiastic and explicit than their private counterparts. The statistical analysis confirms significant differences in directness, politeness, and modality between public and private communications, underscoring the role of audience and medium in shaping language use. These insights offer practical applications for social media communication strategies, emphasising the importance of tailoring messages to the context for effective engagement. The study also contributes to theoretical understanding by demonstrating how digital communication practices align with theories of politeness and face management. Future research should continue to explore the dynamic nature of social media interactions, including cross-cultural comparisons and evolving communication trends, to further elucidate the dynamics of digital discourse.

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