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PRAGMATIC INFERENCE AND CONTEXTUAL GAP-FILLING IN DIGITAL COMMUNICATION: A CYBERPRAGMATIC ANALYSIS OF MULTIMODAL MEANING-MAKING ON SOCIAL MEDIA PLATFORMS

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Abstract

Abstract
This paper investigates pragmatic inference and contextual gap-filling in digital communication, with a specific focus on multimodal meaning-making on Twitter/X, Instagram, and WhatsApp. Grounded in Francisco Yus's (2011) Cyberpragmatics framework and Sperber and Wilson's (1986, 1995) Relevance Theory, the study examines how users negotiate communicative contexts that are simultaneously cue-impoverished and multimodally enriched. A qualitative, theoretically driven methodology informed by Computer-Mediated Discourse Analysis (Herring, 2007) was employed, drawing on 120 purposively sampled English-language interactions across the three platforms. The corpus is limited to English-language data, and cross-linguistic generalisability is not claimed. The analysis reveals that social media users employ a diverse repertoire of compensatory pragmatic strategies including emoji deployment, typographic deformation, hashtag pragmatics, and visual anchoring to close the inferential gap created by the absence of physical co-presence. Findings further demonstrate that the principle of optimal relevance operates dynamically across platforms, with users calibrating cognitive effort against anticipated cognitive effects in platform-specific ways. The study proposes three theoretical extensions to the Cyberpragmatics framework: multimodal ostension, layered implicature in emoji-text co-deployment, and platform-conditioned relevance thresholds. These concepts build on and extend prior work by Yus (2019) on multimodal memes and Dainas and Herring (2021) on emoji pragmatics, offering more granular inferential accounts applicable to contemporary multiplatform communication. These findings contribute a refined conceptual vocabulary to Cyberpragmatics and carry pedagogical implications for digital literacy education and second-language pragmatic competence in online environments.
Keywords: *Cyberpragmatics, Relevance Theory, digital discourse, pragmatic inference, social media, multimodal communication, emoji pragmatics, contextual gap-filling*

Introduction

Over the last two decades, digital communication technologies have transformed the conditions of linguistic production, transmission, and interpretation in fundamental ways. Social media platforms like Twitter/X, Instagram, and WhatsApp have emerged as the principal environments for much of daily communication worldwide. They impose individual syntactic, temporal, and semiotic constraints on the verbal behaviour of their users. Many such platforms may not simply be regarded as written or spoken; they are hybrid communicative environments that combine the permanence of text with the spontaneity of speech, the immediacy of face-to-face interaction with the temporal lag

of correspondence, the verbal modality with imagery, sound, etc., and other unique resources of the digital medium. A major challenge is deriving meaning in an environment that creates and interprets symbols; this is one of the greatest contemporary intellectual challenges, falling at the intersection of pragmatics, linguistics, and communication studies.

For a long time, the domain of pragmatics has been concerned with the basic recognition that what speakers communicate is necessarily more than what they say. Pragmatics from Austin's (1962) performative theory and Searle's (1969) taxonomy of speech acts to Grice's (1975) maxims of cooperation and Sperber and Wilson's (1986) Relevance Theory has shown with theoretical precision that meaning is an inferential achievement: addressees construct utterance meanings from encoded information and contextual knowledge, drawing on cognitive operations governed by relevance principles (these operations being predictable and rational). However, the digital revolution of human communication has made this picture very complex. When people are separated not only by distance but also by the affordances of platforms that filter out vocal quality, facial expression, gesture, and the immediacy of reciprocity in their meaning-making, new inferential operations must adapt, compensate, and innovate.

This adaptation is what Cyberpragmatics, the framework Francisco Yus (2011) proposes to theorise, aims to do. Yus describes Cyberpragmatics as the application of cognitive pragmatics, specifically Relevance Theory, to the study of Internet-mediated communication (Yus, 2011). The framework explores how contextual information conventionally enriched by the audio-visual co-presence of interlocutors is accessible to varying degrees, or systematically diminished, across media, and how users engage in compensatory strategies to fill the resulting inferential gaps. In the early phases, analyzing e-mail, chat rooms, blogs, social networking sites, and other online platforms helped Cyberpragmatics a lot. Nonetheless, due to the rapid evolution of social media platforms, the rise of multimodal digital communication, and the creation of new semiotic resources such as emoji, memes, and GIFs, it needs to be extended and refined further to better account for communicative phenomena that were not fully anticipated in its original formulation.

The growing scientific literature on digital discourse (Herring, 2007; Thurlow & Mroczek, 2011; Tagg, 2015; Bou-Franch & Garcés-Conejos Blitvich, 2019) nevertheless leaves some gaps. To begin with, many existing Cyberpragmatics studies have been conducted on text-dominant platforms. Secondly, a systematic comparative study has yet to be conducted to determine whether platform-specific affordances influence users' relevance calibration. Furthermore, there has not been any integrative inferential account of emoji within Relevance Theory and digital communication. This study aims to bridge a gap in the literature by conducting a qualitative analysis grounded in conversation theory, drawing on three social media platforms with differing affordance profiles.

The following research questions guide the study: (1) What compensatory pragmatic strategies do social media users employ to achieve mutual manifestness in cues-impoverished digital environments? (2) How does the principle of optimal relevance operate across social media platforms with different multimodal affordances? (3) What new theoretical concepts are required to extend the Cyberpragmatics framework to account for multimodal meaning-making in contemporary social media communication? The scope of the study is limited to English on three platforms. Also, it does not claim cross-linguistic generalisability. Moreover, the theoretical principles discussed are posited to apply broadly to human communicative cognition.

Literature Review

Foundational Theories in Pragmatics

The theoretical history of Cyberpragmatics can be traced back to traditional pragmatics. Austin's (1962) speech act theory initiated the insight that utterances do something; that to say something is to do something. Searle's (1969) 'illocutionary acts' systematised a taxonomy of communicative functions applicable, including in the digital context. In relation to digital communication, the notion of indirect speech acts is apt as users routinely perform requests, complaints, and expressions of solidarity through forms that do not overtly encode them. Grice's (1975) Cooperative Principle and its maxims established the inferential mechanism by which listeners recover communicative intentions beyond the literal content of utterances. These foundational accounts are well established in the pragmatics literature; this review therefore concentrates its critical engagement on the more recent developments directly relevant to digital and multimodal contexts, where the specific gaps addressed by this paper arise. Grice's theory may be overly rational, but it established that what is said is inferential and context-dependent.

Sperber and Wilson's Relevance Theory (1986, 1995) presented an important advance, replacing the original four maxims of Grice with a single principle based on cognition: relevance. According to the theory, human cognition is geared to maximising the relevance (the ratio of cognitive effects to processing effort). Further, every ostensive communicative act carries with it the presumption of its own optimal relevance (Sperber & Wilson, 1995, p. 270). The applicability of this framework to Cyberpragmatics is of major importance, as variable context availability across different digital settings will affect the cost-benefit calculation involved in relevance processing. According to Yus (2011), the properties of each cyber-medium, or its position on scales of synchrony, orality, and contextual saturation, alter the assessment of relevance by modifying the cognitive effects available and the mental effort required to obtain them.

Digital Discourse and Computer-Mediated Communication

Since the early 1990s, use of computer-mediated communication (CMC) has been the subject of increasing focus and activity. Studies that compared writing and face-to-face speech in online texts were among the first research. Later, they made more fine-grained theoretical formulations. Thus, digital language may be considered a site of a complex sociolinguistic practice. According to Herring (2007), it is important to analyse CMC discourse with respect to both medium and social factors. The latter category includes the participation structure, anonymity, and group membership. Crystal's (2011) ground-breaking account of internet language identifies several characteristic features under the label of netspeak, which raises productive questions about their pragmatic and sociolinguistic status that have since been pursued. Thurlow and Mroczek (2011) situate digital discourse through the lens of semiotic change, arguing that the digital is a configuration of meanings and resources across verbal, visual, and interactional types. Tagg (2015) emphasised that Internet language is heteroglossic, intertextual, and contextually contingent.

Cyberpragmatics: The Yus Framework

Yus's (2011) Cyberpragmatics framework, developed in a series of publications from 2001 onward and culminating in his 2011 monograph, serves as the core theory underpinning this study. To get started, Yus (2011) has proposed four basic hypotheses about the nature of communication on the internet to lay the groundwork for a science he calls Cyberpragmatics. The first hypothesis is that

Internet users have communicative intentions and expect them to be recognised as communicative. Second, users utilise inferential strategies equivalent to those used in face-to-face interaction. Third, Internet users have expectations regarding their interlocutors' access to contextual information sufficient for proper message interpretation. Finally, attributes of the various cyber-media modulate contextual saturation, cognitive effects, and the degree of mental effort involved in message processing.

A main idea in Yus's framework is that cue filtering occurs across different digital media, which filter out aspects of the communicative context available in face-to-face interaction, vocal quality, facial expression, gaze, posture, and gesture, creating gaps that must be filled but also filter the context. Figure 1 from Yus (2011) shows the degree of contextual saturation across cyberspace.

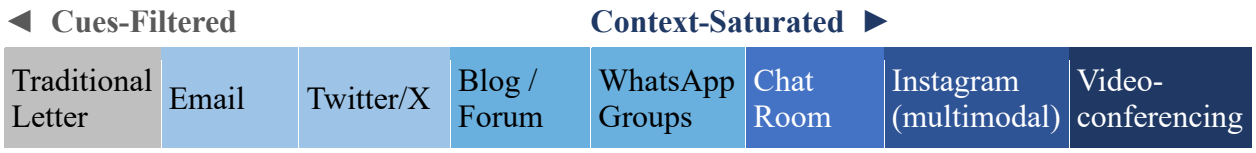

Figure 1. Scale of Contextual Saturation Across Cyber-Media (adapted from Yus, 2011). Darker shading indicates greater contextual saturation.

The notion of oralised written text, which refers to text deliberately deformed through the purposeful misspelling of words, manipulation of punctuation, and other typographical features, to suggest an oral dimension, is one of the responses to the contextual gap in text-based communication (Yus, 2011). Cyberpragmatics has also been applied to internet memes (Yus, 2019). This paper argues that memes are multimodal utterances, whose interpretation requires integration of verbal and visual information. According to Dainas and Herring (2021), emoji pragmatics can be studied from a CMC perspective, and emoji have a complex range of functions that may either modify tone or illocutionary force or be communicative in their own right. Despite these developments, the inferential status of emoji within a Relevance-theoretic account and the layered implicature in multimodal utterances remain to be thoroughly theorised, gaps that the present study addresses.

Theoretical Framework

The current study employs Cyberpragmatics as a global theoretical framework and Relevance Theory as an analytical tool. The relevant theory by Sperber and Wilson (1986, 1995) distinguishes several important analytical constructs, including cognitive effects, processing effort, optimal relevance, mutual manifestness, and the ostension. Cognitive effects are the changes in the hearer's cognitive environment produced by the processing of an utterance. Processing effort refers to the mental cost incurred in deriving cognitive effects. Optimal relevance is the occurrence of maximised cognitive effects with minimised processing cost. Mutual manifestness means that the assumptions are equally accessible in the cognitive environment of the interlocutors. The ostension refers to the deliberate production of a stimulus that indicates the communicator's intention to communicate. The analysis provides a visual representation to illustrate Yus's (2011) ideas of contextual gap-filling, cue filtering, and oralised written text, along with the concept of multimodal

ostension.

The reason Relevance Theory is the main theoretical approach is that it can account for pragmatic inference across the board without needing to tweak its proposals for specific modalities. According to Yus (2011), communication is a human faculty that operates according to the same cognitive principles regardless of the medium used; what varies is the communicative context and the resources we have for achieving mutual manifestness. The Cyberpragmatics Communication Model used in this study is presented in Figure 2, which maps the core constructs of relevance theory onto the digital communication process.

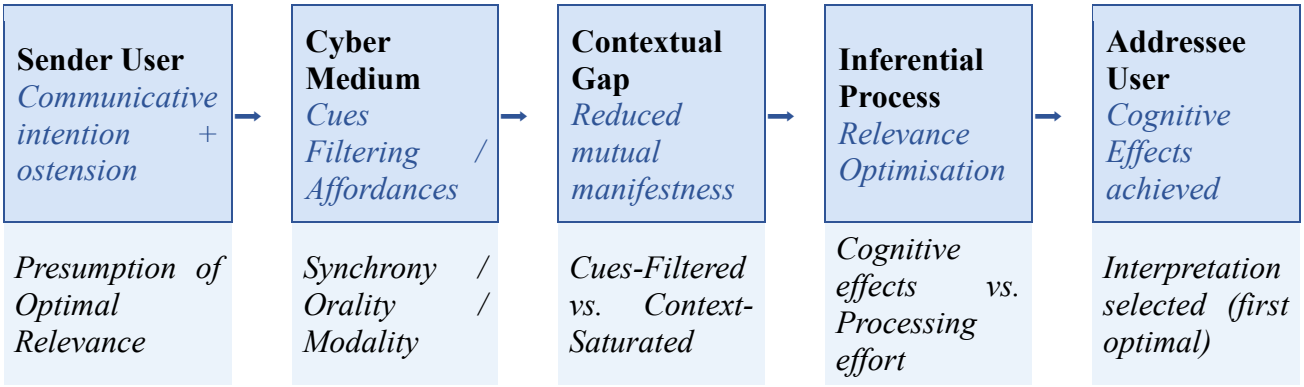

Figure 2. Cyberpragmatics Communication Model: Relevance Theory applied to digital communication (based on Yus, 2011). Boxes indicate key stages; lower labels identify the corresponding Relevance-theoretic construct at each stage.

Brown and Levinson's (1987) politeness theory, first developed by Goffman (1959), is very useful for informing the theoretical framework regarding face and impression management. These frameworks have a limited supplement: they address the social and relational dimensions of communicative choices. In particular, they explain why users opt for specific compensatory strategies in face-sensitive contexts (e.g., softening criticism with emoji, managing self-presentation in Instagram captions) rather than a cognitive-pragmatic account offered by Relevance Theory. The analysis below is generally consistent with this conceptual framework relating to relational or face-oriented phenomena. Where the primary inferential mechanism is sufficiently explained by Relevance Theory alone, Goffman, Brown, and Levinson are not drawn upon. The analytical model uses theoretical resources to provide an account of multiple dimensions of meaning-making in social media talk.

Research Methodology

Research Design

The researcher employed a qualitative, theoretically led methodology that stems from digital discourse analysis. Given the interpretative nature of the study and the interactional focus of pragmatic analysis, it is argued that a qualitative approach is well-suited for this study. It involves investigating how people make pragmatic inferences and generate meaning in casual online communication. The methodology adheres to Herring's (2007) Computer-Mediated Discourse Analysis (CMDA) framework, which serves as a guiding framework for selecting analytical

categories, sampling discourse, and relating observations to a more general theoretical claim. The analysis is based on close reading, contextual interpretation, and iterative comparison across platforms, as laid out in qualitative discourse research (Androutsopoulos, 2014; Tagg, 2015).

Data Sources and Sampling

Data were gathered from three social media sites. These are Twitter/X, which is a microblogging platform, whose character limitations shape public discourse but offers substantial debate capacities due to rich hashtag and mention practices; Instagram, whose image-first orientation enforces this primacy; and WhatsApp, whose closed-group character, high synchrony, and provision of a full inventory of multimodal resources (emoji/stickers/voice messages, etc.) qualify it as a social media site. The three platforms were chosen because their affordance profiles differ in terms of synchrony, audience structure, multimodal resources, and message length, representing substantially different conditions for pragmatic meaning-making. Analysis of the calibration of the principle of optimal relevance was enabled by the platforms presented in the article.

Table 1 provides a structured comparison of the affordance profiles of the three platforms analysed.

Table 1. Affordance Profile Comparison of the Three Platforms Analysed.

Platform	Synchrony	Audience Structure	Char. Limit	Primary Modality	Contextual Saturation Level
Twitter/X	Asynchronous (quasi-sync.)	Public / Semi-public	280 characters	Verbal + Hashtag/Emoji	Low-Medium (text-dominant; reduced shared context)
Instagram	Asynchronous	Public / Follower-gated	2,200 (caption)	Visual-primary; verbal secondary	Medium-High (image anchors shared context)
WhatsApp	Synchronous (high presence)	Closed group / Dyadic	No limit	Verbal + Full multimodal	High (persistent history; shared group knowledge)

The researchers used purposive sampling to select interactions that richly instantiate the pragmatic phenomena under investigation. Interactions were selected that involved any one of the following: (a) non-literal communication that requires inferential recovery of communicative intentions, (b) taking up of compensatory pragmatic strategies, (c) multimodal co-deployment of verbal and visual resources, and (d) communicative success or failure due to pragmatic factors. A sample of 120 interactions was extracted, comprising 40 exchanges from Twitter/X threads, 40 exchanges between posts and comments on Instagram, and 40 exchanges from WhatsApp group conversations.

Analytical Method

Analysis occurred in repeated cycles of coding and theorising. During the first coding cycle, the

researchers annotated interactions for surface pragmatic features, including emoji, hashtags, typographic deformation, indirect speech acts, ellipsis, and deixis. In the next cycle of analysis, they categorised each interaction by examining the inferential demands it posed. They then examined the contextual information needed to understand the interaction correctly. Subsequently, they examined the strategies participants used to provide that information. During the third cycle, comparisons across platforms were done. Theoretical concepts that emerged were shaped through repeated readings of the data and discussions with the theoretical literature.

Ethical Considerations

The research follows ethical guidelines for Internet research (Association of Internet Researchers, 2019). Public Twitter/X and Instagram posts were treated as analogous to public utterances in observable spaces, consistent with standard CMC ethics practice (Herring, 2007). WhatsApp data required a more rigorous consent procedure given its semi-private, closed-group character: individual informed consent was obtained from all participating group members prior to data collection, with the research purpose and the nature of anonymisation clearly explained. No data were collected from groups where a member declined consent or where group membership included individuals under 18 years of age. Consent was recorded in writing. Before analysis, all data were anonymised by replacing usernames, display names, and any identifying contextual details with alphanumeric codes. Analytical reliability was addressed through independent double-coding of a 20% subsample (24 interactions) by a second analyst familiar with Relevance Theory. Disagreements were resolved through discussion and reference to the theoretical definitions in Section 3. It is acknowledged as a limitation of this study that formal inter-coder reliability statistics (e.g., Cohen's kappa) were not computed; the iterative, discussion-based approach to coding is characteristic of theoretically driven qualitative discourse research (Androutsopoulos, 2014) but represents a methodological boundary that future quantitative replication studies should address.

Data Analysis

Compensatory Pragmatic Strategies Across Platforms

The study of the 120 sampled interactions demonstrates that social media users employ an impressive range of compensatory pragmatic strategies to address the inferential problems posed by cue-filtered settings. The six main strategies identified in the dataset are classified in Table 2 along with their definitions, examples from the corpus, platform occurrence, and functions according to a Relevance-theoretic account.

Table 2. Taxonomy of Compensatory Pragmatic Strategies in Social Media Communication.

Strategy	Definition	Illustrative Example	Prevalence	Pragmatic Function (RT)
Typographic Deformation	Creative spelling, repeated letters/punctuation, irregular capitalisation to signal prosodic	*"I am DONE with this situation lmaooooo."*	High on Twitter/X & WhatsApp	Reduces processing effort by explicitly encoding speaker

Strategy	Definition	Illustrative Example	Prevalence	Pragmatic Function (RT)
	and attitudinal information			attitude; compensates for absent vocal cues
Emoji as Multimodal ostension	Deployment of emoji as unified ostensive stimuli, alone or combined with verbal text, to generate implicatures not encodable verbally	*"okay wait 🔥🔥👀" (Instagram comment on an outfit photo)*	High across all platforms	Generates layered implicatures (evaluation + gaze-equivalent + relational FEA); increases cognitive effects
Hashtag Implicature	Use of hashtags to produce ironic or metacommentary meanings through incongruity between hashtag convention and propositional content	*"Just spent 2hrs at the DMV #blessed #adulting"*	High on Twitter/X; low on WhatsApp	Generates ironic implicatures via incongruity; achieves communal bonding through shared recognition
Platform-Conditioned Contextual Framing	Exploitation of platform-level interpretive schemata (genre conventions) as shared contextual assumptions reducing inferential effort	*"So cute!!" on a selfie activates face-enhancement schema*	Medium-High on Instagram & WhatsApp	Activates platform-genre assumptions; reduces processing effort for socialised users
Oralised Written Text	Orthographic and typographic strategies to connote text with speech-like qualities (Yus, 2011)	*"omg WHY would u even 😭😭😭"*	High on WhatsApp; moderate on Twitter/X	Compensates for absence of oral channel; signals emotional stance without added

Strategy	Definition	Illustrative Example	Prevalence	Pragmatic Function (RT)
				inferential cost
Ellipsis & Contextual Deixis	Systematic omission of information recoverable from shared platform/group context; reliance on persistent chat history	*"Meeting postponed again" (WhatsApp group with shared history)*	Very high on WhatsApp	Exploits shared mutual manifestness to minimise encoding effort while preserving cognitive effects.

Examples are drawn from the study corpus; all identifying information has been removed. Note: Prevalence labels ('High,' 'Medium-High,' etc.) reflect the analyst's interpretive assessment across the 120-interaction corpus and are not derived from systematic frequency counts. This is a recognised limitation of the qualitative design; future quantitative corpus studies should replace these impressionistic labels with verified frequencies.

Typographic and Orthographic Deformation.

Consistent with Yus' (2011) notion of oralised text, participants across all three platforms consistently use typographic and orthographic resources to convey prosodic and attitudinal meanings not typically found in writing. The presence of repeated letters, such as at the start of a sentence (Sooooo good!!!), unconventional capitalisation (this is EXACTLY what I said), and non-standard punctuation (why would you even say that……) functions as a paralinguistic marker that modulates the illocutionary force and emotional register of utterances. According to relevance theory, these deformations reduce processing effort. Such signals are explicit and easily decodable. Overall, they produce cognitive effects that relate to the speaker's emotive state, without requiring much inferential work.

Emoji as Multimodal Ostensive Stimuli.

The use of emoji is one of the most important recent pragmatic innovations in digital communication, and the present corpus provides substantial evidence for its complex inferential status. Emoji does not just substitute emotional content. The emojis used throughout the interaction serve many pragmatic functions. The first is as an illocutionary force indicator; the emoji modulates the speech-act value of the verbal utterances. The next is an attitudinal marker; it indicates the speaker's attitude towards the propositional contents. The other functions are also topic shifters. Furthermore, it can function as a communicative act in its own right. In this way, it conveys a meaning not encoded in the accompanying verbal text.

Consider the comment thread below an Instagram picture of a friend in a new outfit, to which a user responds: "okay wait 🔥🔥👀". The marker "okay, wait" has been shown to serve both a verbal and discourse marker function. The fire emoji usually means 'excellent' or 'attractive' in English-

language social media discourse. Furthermore, in language, the eyes emoji pragmatically functions as a way to signal that you are noticing or paying attention. The overall cumulative effect creates a layered cognitive effect consisting of propositional content (positive evaluation), attitudinal stance (enthusiastic), and relational implicature (attentive self-presentation awareness). These effects would be difficult to achieve with text alone, as they would place increased processing demands.
The concept of multimodal ostension has been theorised here to refer to cases in which social media users use verbal and visual elements as a single ostensive stimulus to direct the addressee's attention toward a complex communicative intention, the interpretation of which mobilises both modalities. The notion draws on Yus's (2011) model, which focuses exclusively on textual clues and offers a fully multimodal account of ostensive communication in a digital environment.

Hashtag Pragmatics.
On social media sites like Twitter/X, hashtags serve practical functions that go far beyond their basic indexing role. In the dataset under analysis, hashtags act as metacommentary, irony, stance text, and intertextual resource. One can see an example tweet that reads, "Just spent two hours in a queue at the DMV. Living my best life #blessed #adulting" uses the hashtags ironically. In doing so, it creates a rather stark, ironic contrast with the ordinary misery described in the tweet's propositional content. The ironic reading is retrievable by attributing the contextual assumption that queuing at a government office is not experientially consistent with the positive evaluations which #blessed and #adulting typically index. What we may call hashtag implicature arises from the incongruity between the conventions of hashtags and their propositional content.

Results and Discussion
The findings from the current study confirm and substantially extend several major claims of the Cyberpragmatics framework while introducing new theoretical concepts that address aspects of multimodal digital communication not anticipated in earlier formulations. The analytical findings structured by research questions are summarised across all platforms in Table 3.

Table 3. Cross-Platform Summary of Analytical Findings and Theoretical Contributions.

Research Question	Twitter/X	Instagram	WhatsApp	Theoretical Contribution
RQ1: Compensatory strategies for mutual manifestness	Typographic deformation; hashtag implicature; ellipsis within reply threads	Visual anchoring; emoji as ostension; platform genre schema activation	Ellipsis + deixis exploiting group history; oralised written text; voice notes	Platform-specific strategy repertoires governed by affordance-conditioned relevance calculus
RQ2: Operation of optimal relevance across	Lower threshold for explicit	Image as primary cognitive-effect generator; verbal	Highest contextual saturation;	Platform-conditioned relevance

Research Question	Twitter/X	Instagram	WhatsApp	Theoretical Contribution
platforms	encoding in public contexts; irony via hashtag incongruity	caption as anchor/implicature trigger	lowest encoding density; deferred effects via group norms	thresholds constitute a component of digital pragmatic competence
RQ3: New concepts for multimodal Cyberpragmatics	Hashtag implicature; ironic Ostension	Multimodal stension; layered implicature in emoji-image-text combinations	Layered implicature; persistent-context exploitation	Multimodal Ostension; layered implicature; platform-conditioned relevance thresholds (all three platforms)

Optimal Relevance Across Platform Affordance Profiles

The findings regarding the first research question indicate that compensatory strategies are diverse and very sensitive to platform affordances. Twitter/X users are constrained by character limits. They also operate largely in the public domain. Therefore, to convey their communicative motives, they must rely heavily on this typographic deformation. Hash pragmatics and conversational implicature also aid Twitter/X users in communicating their communicative intent when their messages are longer. Instagram users exploit the platform's visual epistemic predominance to produce cognitive effects through particular image-text interactions that function as a single multimodal utterance. WhatsApp users mostly depend on ellipsis, deixis, and assumptions derived from group membership and interactional history in closed-group contexts.

Yus's (2011) observations are believed to align with those of the present study, namely that attributes of cyber-media modulated the estimation of relevance in the earlier study. However, the current study shows in greater detail how relevance is modulated across specific affordance profiles of contemporary social media. Researcher cites the findings to demonstrate how optimal relevance thresholds differ across platforms. Users on WhatsApp routinely accept lower levels of explicit encoding because the shared context reduces processing effort. That said, users on Twitter/X deploy a broader range of compensatory strategies because the platform's public and anonymous nature reduces shared contextual assumptions. In this way, the finding extends the Cyberpragmatics framework empirically.

Layered Implicature and Multimodal Ostension

To address the second research question, the analysis shows that combining verbal and visual modes yields inferential structures absent in purely verbal accounts. The communicative interpretation of a message consists of a synthesis of independent implicatures arising from verbal and visual meaning, and that layered implicature is the term given to the discussion of such cases.

Creating such a synthesis takes more processing effort but yields more effects, keeping the relevance ratio balanced. This shows that memes are not the only multimodal constructions that have arisen from social media use. As Yus (2019) shows, memes can be analysed multimodally. Likewise, Yus (2018b, 2021) shows how different types of social media constructions create new meanings.

Multimodal ostension refers to how ostensive communication operates in multimodal digital environments. The classical Relevance-theoretic account of ostension (Sperber & Wilson, 1995) assumes that ostensive stimuli are essentially verbal or broadly semiotic. Still, it lacks a specification of how these multimodal constructions function ostensively. According to the analysis, social media users commonly treat multimodal combinations as a single act, i.e., an instance of ostension, instructing the addressee to attend to the interaction between elements rather than to a single element as the bearer of the communicative intention. This is the theoretical extension of the concept of ostension to multimodal communicative acts.

Platform-Conditioned Relevance Thresholds

The third major finding of the study concerns the importance of platform-level discursive norms. All three platforms show how well participants orient themselves with what counts as an adequate, appropriate, or maximally relevant communicative contribution for that platform. These conventions serve as common contextual assumptions that reduce participants' effort when they have been socialised into the platform's communicative culture, much as genre-level contextual assumptions in relevance-theoretic accounts of text interpretation.

The analysis also reveals instances of communicative failure caused by incompatibilities in relevance thresholds, where a message that is optimally relevant within the norms of one platform infringes the pragmatics of another. Evidence from these cross-platform pragmatic failures is highly revealing regarding the claim that platform-conditioned relevance thresholds are a real feature of users' pragmatic competence.

Key Findings

The findings of the study demonstrate that social media conversations are not pragmatically deficient. Rather, it is backed by an advanced, systematically organised set of compensatory strategies that facilitate the successful attainment of mutual understanding, regardless of the lack of assistive face-to-face cues. Users use typographic deformation, emojis, hashtags, and images strategically to achieve mutual manifestness and control possible interpretation as well. The strategies are not random but are tuned to the affordances of specific platforms. However, the operation of optimal relevance is platform-sensitive and dynamic. In their efforts to calibrate their choices, users of Twitter/X, Instagram, WhatsApp, and other platforms balance cognitive efforts and cognitive effects. Emojis included in the process are not just emotional extras. On the contrary, they’re a complex pragmatic resource. These are multimodal ostensive stimuli that can independently engender implicatures and modify illocutionary force and inferential meanings.

Limitations

The researchers acknowledge several limitations of this study. First, the use of a single language, English, ensures the authors do not claim cross-language generalisability. The compensatory strategies and platform-conditioned relevance thresholds identified here may work differently in

non-English digital contexts where script systems, emoji designations, and platform affordance norms differ (Dainas & Herring, 2021). The second limitation is that the prevalence labels assigned in Table 2 ('High,' 'Medium-High') are not frequency counts but rather interpretations, arising from the qualitative nature of the design. Furthermore, formal inter-coder reliability statistics were not conducted, yet the coding disagreements were resolved through iterative theoretical discussion. Future studies should nevertheless take quantitative reliability measures. The purposive sampling strategy, while suitable for our theoretically-driven qualitative analysis, may over-represent instances of clear pragmatic strategy use and under-represent ambiguous or failed cases. In conclusion, the three platforms that were analysed, Twitter/X, Instagram, and WhatsApp, do not showcase the full richness of social media environments; emerging platforms, like TikTok and Telegram, warrant their own separate study in the future.

Conclusion

This study aimed to examine pragmatic inference and contextual gap-filling in digital communication, specifically through multimodal meaning-making on social media. The analysis of 120 interactions across Twitter/X, Instagram, and WhatsApp, theoretically grounded in Cyberpragmatics and Relevance Theory, yielded findings that validate and strongly extend the existing theoretical framework.

The primary finding of the research reveals that users of social media are sophisticated pragmatic actors whose communicative strategies are precisely calibrated to the inferential demands of their communicative environment. Social media communication is not deficient in communicative resources, as demonstrated by its rich ecology of compensatory strategies, such as typographic, emoji, and platform-defined strategies, which allow social media users to construct or recover complex communicative intentions in contexts fundamentally different from collocated interaction. Users choose and deploy the combination of communicative resources that yields the maximum cognitive effect with the minimum processing effort, in a way that is systematically sensitive to the affordances of the specific platform on which the communication occurs.

The study makes theoretical contributions in three important ways. First, the concept of multimodal ostension, which extends the classical Relevance-theoretic account of ostensive communication to multimodal digital environments. In doing so, it provides a principled account of how verbal and visual elements are combined in unified communicative acts. Second, the concept of layered implicature permits an analysis of the complex inferences generated by the co-deployment of emoji-text and similar constructions. Third, the concept of platform-conditioned relevance thresholds enriches the Cyberpragmatics framework's account of contextual mediation by identifying platform-level discursive norms as a systematic determinant of relevance expectations.

Digital literacy education can benefit from these contributions. As social media communication shows signs of becoming an important linguistic and pragmatic performance in a professional, educational, and interpersonal capacity, the ability to negotiate the pragmatic norms and inferential demands of various platforms is central to communicative competence. The results imply that digital pragmatic competence (the capacity to adjust communicative strategies to fit the affordances of the platform, the inferential demands, and the expectations of relevance) should be explicitly targeted in language education curricula. The analysis was limited to English-language data downloaded from three platforms, and future studies should conduct a comparative analysis across further platforms and languages.

Recommendations

Future studies can investigate the applicability of cyberpragmatics across various languages, cultures, and emerging contexts, as the current study has a limited scope. Cross-linguistic research is especially necessary to establish whether compensatory pragmatic strategies and multimodal ostension behave similarly in non-English digital contexts and whether platform-conditioned relevance thresholds vary across languages. Longitudinal studies are suggested to help track how pragmatic norms and communicative strategies develop as social media evolves. Moreover, employing computational methods, notably natural language processing tools, could facilitate large-scale identification and analysis of such strategies, thereby strengthening their empirical foundations. It is equally important to research intercultural digital pragmatics to see how users from different backgrounds negotiate meaning and where cross-cultural pragmatic failures are likely to occur. A taxonomy of emoji functions, grounded in theory and systematic, would help us understand them better from a relevance-theoretic perspective.

The findings indicate the necessity of incorporating digital pragmatic competence in language education, particularly in terms of platform-sensitive communication and the multimodal making of meaning. Students should master not just the linguistic knowledge but also the meanings and production of contextually appropriate digital communication. Media literacy education must specifically address the inferential impact of online communication, that is, how meaning is made, negotiated, and sometimes misinterpreted in filtered environments. Additionally, the findings of this study may guide platform designers in understanding how interface features and affordances shape users' pragmatic expectations and communicative behaviour, thereby enhancing interaction and reducing misunderstandings.

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