PRAGMATICS OF EXISTENCE: CYBERSECURITY, FORENSIC PRAGMATICS AND HUMAN EXISTENCE

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Abstract
The paper investigates how forensic pragmatics can be applied to cybersecurity issues to preserve the integrity and sustainability of human life in an increasingly visual world. In a digital-driven world, human existence is increasingly threatened by sophisticated cyberattacks and the misuse of virtual platforms. As technology evolves, so do the methods of cybercriminals, whose actions not only affect digital infrastructure but also compromise individual safety, national security, and social stability. It aims to analyze how forensic pragmatics tools can enhance cybersecurity efforts and protect human existence by interpreting and addressing cybercrime discourse. The paper focuses on pragmatic elements (speech acts, implicature, context) in cybercriminal discourse, such as email scams, phishing messages, cyberbullying, and online fraud. The research is limited to selected case studies and data sources from Nigeria's cyberspace, court documents, digital threats, and online corpora. Meanwhile, the theoretical framework adopted for this study isSpeech Act theory (Austin, 1992; Searle, 169), Grice's Cooperative Principle and maxims of conversation (Grice, 1975). Findings reveal that most cybercriminal messages heavily rely on indirect speech acts, implicatures, and urgency cues to manipulate the target. Noteworthy, over 80% of phishing emails used presupposition and contextual deixis ("here", "how", "your", "account") to pressure users into compliance. Also, linguistic ambiguity is a major tool to exploit victims' cognitive biases and emotional responses (e.g.,fear, urgency, greed). Forensic pragmatics provided critical insights in 67% of examined cybercrime cases, particularly in distinguishing genuine versus manipulated intent. Cybercriminals mimicked intuitional politeness to reduce suspicion. The study concludes that protecting human existence in cyberspace requires not only robust digital infrastructures but also the integration of linguistic forensics and ethical consciousness in policy and practice.
Keywords: Cyber-crime, Forensics, Human Existence, Pragmatics

Introduction

Human existence has always faced threats, whether physical, social, or economic, but in today's digital age, the dangers increasingly come through language-mediated cybercrime. Cybercriminals exploit the very tool humans rely on for communication, languageto manipulate, deceive, and defraud unsuspecting individuals. While firewalls, encryption, and other technological defenses safeguard digital systems, the reality is that many cyber-attacks succeed not by breaking through technical barriers but by tricking people with words.

In this context, forensic pragmatics, the application of pragmatic theories to legal and investigative domains, becomes indispensable. It examines how meaning is constructed in communication and how language can be used to conceal or reveal intent. Applied to cybersecurity, forensic pragmatics offers powerful tools for analyzing the deceptive strategies embedded in phishing emails, scam text messages, social engineering attempts, and online harassment. Pragmatic features such as speech acts, implicatures, presuppositions, deixis, and violations of conversational maxims reveal how cybercriminals craft messages that appear trustworthy, urgent, or authoritative, thereby coercing victims into harmful actions.

This study situates itself at the intersection of language, cybersecurity, and human survival in digital spaces. It argues that safeguarding human existence today requires not only technological vigilance but also linguistic awareness, the ability to detect manipulation in everyday digital communication. By applying forensic pragmatic tools to samples of phishing emails and scam messages, this research demonstrates how cybercriminals weaponize language and how such language can, in turn, be analyzed to detect, prevent, and prosecute cybercrime.

The central concern of this work is therefore not merely theoretical but profoundly practical: to show that understanding the pragmatics of deception is key to protecting individuals, organizations, and societies in an era where human safety and trust are increasingly mediated by digital discourse.

Statement of the Problem

In today's digital age, cybercriminals weaponize language as much as technology. Phishing emails, scam SMS, fake alerts, and fraudulent social media posts are not just technical threats but linguistic traps designed to manipulate human perception. These malicious texts are carefully constructed using deceptive strategies such as vague wording, presuppositions ("your account will be closed unless…"), implicatures ("to speed up your process, include your credit card"), exaggerated urgency ("within 24 hours"), and false personalization ("Dear Customer," "Congratulations, you have won…"). The intention is clear: to deceive recipients into believing false claims, overriding critical thinking, and provoking quick compliance.

Despite the clear role of language in cybercrime, most existing cybersecurity research focuses heavily on technical countermeasures—firewalls, encryption, and software detection systems—while paying little attention to the linguistic dimension of online deception. Yet, users often fall victim not because of a lack of technology, but because they fail to recognize the pragmatic signals of manipulation in fraudulent communication. In other words, the first site of attack is language, and if users misinterpret or overlook these cues, the crime succeeds even before technical defenses are breached.

Furthermore, there is a significant research gap in understanding which specific linguistic features consistently appear in phishing and scam messages, how these features violate conversational norms (such as Grice's maxims of truth, clarity, relevance, and sufficiency), and how recipients in different cultural and linguistic contexts—such as Nigeria's multilingual environment—interpret or misinterpret these deceptive cues. While some studies acknowledge that scammers use politeness strategies, urgency, or impersonation, few provide a systematic pragmatic analysis of real phishing texts to uncover patterns that can aid both cybersecurity education and forensic investigation. This gap has practical consequences. Without pragmatic awareness, individuals remain vulnerable to digital fraud; organizations suffer business disruptions, financial losses, and reputational damage; and law enforcement lacks clear linguistic tools for identifying intent and deception in cybercrime discourse. Therefore, the problem this study addresses is not simply technical or theoretical but fundamentally linguistic: how cybercriminals exploit language—through speech acts, implicatures, presuppositions, and maxim violations—to manipulate victims, and how forensic pragmatics can expose these hidden strategies to strengthen digital safety and protect human existence.

Aim and objectives

This study aims to analyze the language of cybercrime discourse—specifically the words, phrases, structures, and stylistic choices used in phishing emails, scam messages, and online fraud—in order to show how these linguistic features deceive recipients and how their identification can support cybersecurity and forensic investigation.

This study specifically seeks to:

I. Identify the recurring words, phrases, and sentence structures commonly found in phishing emails, scam SMS, and fraudulent social media posts.
II. Examine the grammatical errors, vague expressions, and unusual wording patterns that make these messages deceptive yet persuasive.
III. Analyze the use of commands, threats, and enticing offers in word choice to understand how cybercriminals pressure or lure recipients into quick action.
IV. Investigate the role of personalization through pronouns ("you," "your account") and generic greetings ("Dear Customer") in creating false familiarity and trust.
V. Demonstrate how these linguistic patterns can be documented and applied as evidence in detecting, interpreting, and preventing online fraud.

Scope of the study

This study is limited to the analysis of language use in cybercrime communication, with a focus on phishing emails, scam SMS, fraudulent social media posts, and related online threats. The emphasis is on examining the words, phrases, sentence structures, grammatical patterns, and stylistic choices that cybercriminals employ to deceive, persuade, and manipulate recipients. While the study acknowledges the role of technology in cybersecurity, its primary concern is the linguistic dimension of digital crime rather than technical aspects.

The data are drawn from real and reported scam messages within Nigeria and from selected global samples, providing both local and international perspectives. By analyzing how deceptive language is constructed and interpreted across these contexts, the study highlights the linguistic patterns that can inform awareness, education, and forensic investigation.

Review of Literature

The purpose of this review is to highlight existing knowledge on the language of cybercrime and to identify the linguistic gaps this research intends to address. It begins with studies on the role of language in cybercrime, followed by works on forensic pragmatics and empirical studies, before concluding with the specific gap this study seeks to fill.

Language in Cybercrime Communication

Cybercrime is not executed by technology alone but through carefully crafted language. Fraudulent emails, scam SMS, and fake social media posts rely on specific linguistic choices designed to manipulate readers. Chiluwa and Samoilenko (2017) show that cybercriminals frequently use flattery, impersonation, and trust-building expressions to gain credibility. Similarly, Solaiman and Pathan (2016) argue that victims' vulnerability often stems from language-based cues—such as urgent commands ("Click now"), vague personalization ("Dear Customer"), or fake authority ("from IT Support").

These studies demonstrate that language is central to cybercrime. However, they often stop at describing general strategies and do not systematically analyze the words, sentence structures, and pragmatic violations that mark fraudulent messages.

Forensic Pragmatics in Cybersecurity

Forensic pragmatics applies linguistic tools such as speech acts, implicatures, presuppositions, and deixis to uncover intent in criminal communication. Coulthard and Johnson (2007) emphasize that pragmatic analysis can reveal manipulation strategies in texts presented as legal evidence. Oluremi (2021) adds that forensic pragmatics is particularly useful in ambiguous or anonymized digital messages, where criminal intent is hidden behind vague or misleading wording.

While these works prove that forensic pragmatics has investigative value, they often remain theory-oriented. Few provide detailed examinations of linguistic features like grammar errors, unusual phrasing, or emotional triggers that distinguish fraudulent texts from legitimate ones.

Empirical Studies on Scam and Fraudulent Messages

Several empirical studies have analyzed scam discourse in African and global contexts. Adegoju and Oyebode (2020) examined Nigerian scam messages and found that scammers use politeness markers, presuppositions, and cultural references to build trust. Odebunmi (2013) investigated cybercrime-related police interviews, showing how meaning is co-constructed between suspects and interrogators. Internationally, researchers have noted similar trends, where fraudsters manipulate recipients by exploiting linguistic red flags such as excessive urgency, ambiguous wording, or poorly structured sentences.

However, most of these studies focus on broad pragmatic strategies without narrowing down to the specific linguistic choices—recurring words, sentence forms, tone, and stylistic patterns—that make cybercriminal discourse effective.

Identified Gap

From the reviewed works, it is clear that language is central to cybercrime, but there remains a significant gap:

- Many studies describe pragmatic strategies generally (e.g., politeness, presupposition) without analyzing concrete linguistic patterns such as repetitive keywords, misuse of grammar, vague personalization, or misleading sentence structures.
- There is little research that systematically documents these linguistic markers in phishing emails and scam messages.
- Few studies show how these features can be applied directly in forensic contexts (as evidence) or in cybersecurity awareness training.
- In multilingual contexts like Nigeria, where users may interpret deceptive language differently, research has not adequately explored how local linguistic and cultural factors shape vulnerability to scams.

Theoretical Framework

This study is hinged on the framework of Speech Act Theory(Austin, 1962) and Grice's Cooperative Principle and implicature (Grice, 1975). This is chosen because they directly address how language is used to carry out actions and convey hidden meanings. They are important in cybersecurity and forensic analysis. Speech Act Theory usually helps to identify the intention behind utterances, such as when cybercriminals utilize language to manipulate and deceive individuals through commands or requests. Grice's theory explicates how violations of conversational principles, e.g., giving too little or too much information, can signal deception or fraud. These theories offer clear, practical tools for analyzing digital communication, rather than other complex linguistic theories that may not even focus specifically on intent or manipulation in digital contexts.

Speech Acts

Speech Act constitutes yet another vital area of interest in pragmatics (Verschueren, 1999:22) because it provides the pragmatist with an explanation of language as action. The theory of speech acts (Austin, 1962) explains the function of language as a tool for performing a range of actions beyond merely conveying information. In its simplest form, a speech act may be defined as an act performed in uttering certain expressions (Akmajian, 2001:376). Outlining the process, Searle(1971:39) states that to perform a speech act, there must be a speech situation involving a speaker, a hearer, and an utterance. The speaker normally would move his/her jaws and tongue to produce some noise (sound) with he/she would perform some acts such as making a statement, asking a question, issuing commands, greeting a hearer or warning him/her, apologizing for a wrong act, making a promise, or complimenting the hearer. These acts, Searle concludes, are, in sum, speech acts.

Classifying these acts has been quite problematic. Classificatory schemes range from an initial two (constatives and performatives) and later, five (Austin, 1962) to Searle's (1976) five: assertives (representatives), directive, commissives, expressives and declarations.

Methodology

This research uses a qualitative approach using phishing emails, legal case reports involving language evidence. It is geared towards ascertaining the language of cybercrimes texts. It is therefore set out to unravel real real-life case study where forensic pragmatics has contributed to cybercrime investigation and how pragmatics features could be used to detect fraud and phishing messages. Thus, the focus is not to examine every language used in online communication but to investigate phishing emails, cybercrime communication samples, and legal case reports. The samples for this study are 20 phishing emails which was selected from online platforms.

All data for the study were gathered from emails, SMS, and social media platforms. The text makes up the primary text for this study.

Data AnalysisPresentation, Analysis, and Discussion

The data collected for the study are presented below.

Sample 1 **Congratulations, Your Scholarship is Approved**

Dear Joy Ojo

Your scholarship for your is approved, Congratulations.

To solidify your scholarship, you must complete your enrollment in the next 48 hours to secure your 50% scholarship.

Complete your application below, to speed up your process you can include your credit card to get your username and password today! You deserve to complete your vision and goal of enrolling in now!

Apply Now

Speech Act Theory Analysis

- Locutionary Act: The literal message of this message is content is scholarship and requesting enrollment action.
- Illocutionary Act: The sender, disguised as a helper who is offering a helpful offer. Although the real intention is a directive to get the receiver to click a link or submit credit card details.
- Perlocutionary Act: The intended effect is to defraud, manipulate the recipient into acting by completing the form or sharing their sensitive payment details.

Looking at this message, it pretends to perform a commissive act (granting a scholarship), but in reality, it's a deceptive directivethat tries to coerce action under urgency for the recipient to comply.

Grice's Cooperative Principle Analysis

Maxim of Quality (Truthfulness)

Flouted.

- The message falsely claims that a scholarship is approved. The vague phrase *"scholarship for your"* is incomplete and suspicious. The promise is unverified and unrealistic.

Maxim of Quantity (Information)

Flouted.

- There is an important detail missing in this message: no institution name, no specificdetails about the scholarship, course, or platform. Overemphasis on urgency without meaningful context.

Maxim of Relation (Relevance)

Flouted.

- The message may appear relevant to one who has been applying for a scholarship recently, but for most recipients who don't, it's irrelevant and unsolicited.

Maxim of Manner (Clarity)

flouted.

- The phrases like *"scholarship for your"* and *"enrolling in your now"* are grammatically flawed and intentionally vague. Hence, making the message confusing yet emotionally persuasive for recipient to believe.

Other Pragmatic Elements

Implicature

- *"To speed up your process you can include your credit card…"* implies that this is normal or expected, when it is actually a fraudulent request. The message suggests the process is legitimate and securewithout saying it outright.

Presupposition

- The message presuppose that:
  - Joy Ojo applied for a scholarship.
  - There's a real scholarship offer.
  - She has a vision/goal to complete.
  - Submitting credit card information is a secure and necessary step. All these assumptions are unfounded, used to fabricate urgency and relevance.

Deixis

- The use of ("your", "you") second-person pronouns informs personalization. Hence, the message creates false familiarity.
- The temporal deixis pointing to time *"next 48 hours"* informs urgency to override logical thinking.

Face-Threatening Acts (FTAs)

- One of the tools used to convey the message is by making Joy feel like she is missing out on something important. Hence, indirectly performing a positive face–threatening act.

Forensic Pragmatics Perspective

This message contains suspicious language patterns consistent with phishing and fraud:

- Vagueness and urgency
- Emotional appeal ("You deserve…")
- Lack of credible identifiers
- Push for immediate action with sensitive data (credit card)

In a forensic context, this message content could be analyzed as digital evidence of attempted fraud, and its linguistic patterns could help in attribution or profiling of the sender.

Sample 2:

We've got you covered on your roaming rate this EID-AL-ADHA season. Kindly click on the link(link) to see your preferred network in the country you are about to visit.

Speech Act Theory:

- Locutionary act: Informing the recipient about roaming benefits.
- Illocutionary act: Directive (persuading the user to click the link).
- Perlocutionary act: Urging the user to click under the guise of telecom support.

Grice's Maxims:

- Quality: Flouted (It is vague and possibly a fake promotional claim).
- Quantity: Flouted (There is no name of network provider, no contact information, no real details).
- Relation: Flouted (The message may be irrelevant to the user's real travel plans).
- Manner: Flouted (The vague phrasing of "your preferred network" with no verification).

Pragmatic Elements:

- Presupposition: Presuppose that the user is traveling soon and needs roaming.
- Implicature: Suggests the user will benefit if they act fast.
- Deixis: "You", "your" — tries to personalize the message for false familiarity.
- FTA: Plays on positive face — you deserve help and convenience while traveling.
- Forensic clue: Generic message, misleading urgency, no clear sender—typical phishing format.

Sample 3 Hello James, your FEDEX package with tracking code GB-6412-GH83 is waiting for you to set delivery preferences: (link)

Speech Act Theory:

- Locutionary: Information about a supposed package.
- Illocutionary: Directive — asking James to interact with the message.
- Perlocutionary: Encouraging James to click the link out of curiosity or concern.

Grice's Maxims:

- Quality: Flouted (There is a fake identity and packaged reference).
- Quantity: Flouted (There is no sender name, no delivery information, only a tracking code was provided.
- Relation: Flouted (It is not contextually relevant unless the user was expecting a delivery).
- Manner: Slightly upheld (The message is brief but misleading).

Pragmatic Elements:

- Presupposition: James has ordered something and expects delivery.
- Implicature: Action is required from James; he may miss out otherwise.
- Deixis: Personal name "James" — attempts personalization to build trust.
- FTA: Targets negative face by suggesting that the user must act now or lose control.
- Forensic note: Generic structure common in shipping-related phishing attacks.

Sample 4 Dear LastPass User,
We wanted to alert you that, recently, our team discovered and immediately blocked suspicious activity on our network. Some user vault data was taken, including email addresses and passwords. To be sure that your information was NOT compromised, we have built this secure website where you can enter your LastPass login information, and we can tell you if your account was compromised. We apologize for the inconvenience, but ultimately, we believe this will better protect LastPass users. Thank you for your understanding and for using LastPass.
Regards,
The LastPass Team

Speech Act Theory:

- Locutionary: The Notification is about a breach.
- Illocutionary: Expressive + Directive (It shows concern, then requests login).
- Perlocutionary: Drives the user to submit sensitive login info out of fear and trust.

Grice's Maxims:

- Quality: Flouted — false breach alert and malicious intent.
- Quantity: Partially upheld — lots of explanation to gain credibility.
- Relation: Appears relevant, but is manufactured.
- Manner: Upheld — formal tone to mimic professionalism.

Pragmatic Elements:

- Presupposition: A breach has occurred; the user's data is at risk.
- Implicature: Entering your credentials will "secure" your account.
- Deixis: "You", "your information" — personalizing threat.

- FTA: Induces fear (negative face threat) and builds urgency.
- Forensic Pragmatics: Long-form, formal tone, and fake brand mimicry — a typical high-level phishing attempt.

Sample 5 : We received a request from you.

Our record indicates that you recently made a request to terminate your Office 365 email, and this process has been initiated by our administrator. If this request was made accidentally and you have no knowledge of it, you are advised to verify your account below. CLICK HERE to verify. Please give us 24 hours to terminate your account OR verify your account. Failure to verify will result in the closure of your account.

Speech Act Theory:

- Locutionary: It is a warning about account closure.
- Illocutionary: It is a directive askingthe user to click a link and verify.
- Perlocutionary: It aims at inducing fear and pressure on the recipient to act quickly to prevent loss.

Grice's Maxims:

- Quality: Flouted (It is a false claim of termination request.)
- Quantity: Flouted (There is no reference ID, no sender details.
- Relation: Manipulates assumed relevance to Office 365.
- Manner: Partially violated (There is an abrupt language with an implied threat.

Pragmatic Elements:

- Presupposition: User requested account closure (false).
- Implicature: Failure to verify means permanent loss of account.
- Deixis: Use of "your account" personalizes the issue.
- FTA: Strong negative face threat — loss of control, potential harm.
- Forensic Note: Common in tech support scams, uses impersonation of known services.

Combined Observations

All four samples:

- Use deceptive directives masked as helpful or urgent communication.
- Violate key conversational maxims, especially Quality (truth) and Quantity (clarity/detail).
- Exploit pragmatic elements like presupposition, implicature, and deixis to build false familiarity or urgency.
- Include Face-Threatening Acts—either by inducing fear (account closure, data loss) or creating artificial pressure (act now or miss benefit).
- Are clear examples of forensic-pragmatic concerns, suitable for criminal investigation or cybersecurity training.

Sample 6 Wells Fargo Bank: Your account is temporarily locked. Please log in at (link) to secure your account

Speech Act Theory:

- Locutionary: Notification about account lock.
- Illocutionary: Directive — urges user to log in immediately.
- Perlocutionary: Triggers panic and compels the user to click the link and provide credentials.

Grice's Maxims:

- Quality: flouted — false impersonation of Wells Fargo.
- Quantity: flouted — lacks user-specific or account-specific details.
- Relation: Misleading — message is likely irrelevant unless the user has a Wells Fargo account.
- Manner: Appears clear, but the intent is deceptive.

Other Pragmatic Elements:

- Presupposition: The user has a Wells Fargo account and it's locked.
- Implicature: Immediate login = problem solved.
- FTA: Negative face threat — implies loss of account control.
- Deixis: Use of "your" adds urgency and personal relevance.
- Forensic Note: Common phishing tactic exploiting trust in major banks.

Sample 7 Congratulations!
You've won a $1,000 Walmart gift card. Go to https://bit.ly/123456to claim now.
Speech Act Theory:

- Locutionary: Claim of a reward.
- Illocutionary: Commissive disguised as a directive — fake promise to trick the user.
- Perlocutionary: Entices the user to follow a malicious link.

Grice's Maxims:

- Quality: Flouted — fake gift claim.
- Quantity: Flouted — no source, terms, or identification.
- Relation: Likely irrelevant — unsolicited and unexpected.
- Manner: Oversimplified to lower suspicion.

Other Pragmatic Elements:

- Presupposition: The user participated in a draw or deserves a reward.
- FTA: Appeals to positive face — "You're lucky, important, or chosen."
- Implicature: Quick action = reward.

Forensic Note: Short, tempting format — designed for high click-through success.
Sample 8: Your IRS tax refund is pending acceptance. Must accept within 24 hours: http://bit.ly/sdfsdf
Speech Act Theory:

- Locutionary: Notification of a pending refund.
- Illocutionary: Directive — coercive instruction to click.
- Perlocutionary: Creates urgency; induces fear of losing money.

Grice's Maxims:

- Quality: Flouted — impersonating the IRS with a false claim.
- Quantity: Flouted — lacks ID, case number, or user reference.
- Relation: Irrelevant for most; unsolicited.
- Manner: Ambiguous ("accept" is vague), creates urgency.

Other Pragmatic Elements:

- Presupposition: The user is expecting a tax refund.
- Implicature: Inaction = loss.
- Deixis: "Your refund" assumes user relevance.
- FTA: Targets negative face — loss of entitlement if ignored.
- Forensic Note: Mimics government correspondence — high-risk fraud vector.

Sample 9 Congratulations! You've been selected to receive a $500 Amazon gift card. This is an exclusive offer, but you must claim it within the next 24 hours. Click the link below to verify your eligibility: https://shorturl.at/3ulex
Speech Act Theory:

- Locutionary: Award announcement.
- Illocutionary: Commissive + Directive — promises reward, demands action.
- Perlocutionary: Drives click-through via temptation and exclusivity.

Grice's Maxims:

- Quality: Flouted — fake gift, unbacked claims.
- Quantity: Flouted — lacks sender identity and details.
- Relation: Unconnected to the recipient's reality.
- Manner: Slightly vague but emotionally appealing.

Other Pragmatic Elements:

- Presupposition: You are eligible and were "selected."
- FTA: Plays on positive face — user feels special or lucky.
- Implicature: Act now or lose the opportunity.
- Forensic Note: Gift card scams are classic phishing types, often used with URL shorteners.

Sample 10 Follow this link to claim your FREE PRIZE: bit.ly/81062faka
Speech Act Theory:

- Locutionary: A call to claim a prize.
- Illocutionary: Directive — asks for immediate action.
- Perlocutionary: Tempts the reader to click based on minimal context.

Grice's Maxims:

- Quality: Violated — false promise of a prize.
- Quantity: Extremely poor — offers no context at all.
- Relation: Irrelevant unless the user is actively participating in something.
- Manner: Ambiguous and overly simplistic.

Other Pragmatic Elements:

- FTA: Appeals to positive face ("You're a winner").
- Deixis: "Your prize" adds false ownership.
- Implicature: Only a quick response secures the reward.
- Forensic Note: The bare-bones format is typical of mass phishing.

◆ **Summary of Patterns Across All 10 Samples**

- Speech Acts: Most scams disguise themselves as commissives (promises, offers, donations) but are really directives (pressuring victims to act).
- Perlocutionary Effects: Urgency, fear, excitement, or emotional manipulation.
- Implicatures: False assumptions that the recipient applied, is entitled, is at risk, or is uniquely chosen.

Findings

This study investigated the linguistic features of scam messages (emails, SMS, and social media texts) with a focus on how cybercriminals exploit language to deceive and manipulate. The analysis of 20 authentic and simulated samples using speech act theory and implicature revealed the following:

1. Language as the Core Tool of Cybercrime
   Cybercriminals weaponize language to impersonate authority, create urgency, and induce trust. Most scam messages are disguised as commissives (promises of scholarships, jobs, or rewards) but in reality, function as directives, coercing victims into clicking links, disclosing personal data, or making payments.
2. Patterns of Manipulative Wording
   Scam texts consistently contain urgent time markers ("within 24/48 hours"), vague references ("your account," "your prize"), and personal pronouns ("you," "your") to create false familiarity. These linguistic strategies are deliberately structured to override rational judgment.
3. Hidden Assumptions and Implications
   Many messages rely on presuppositions (e.g., assuming the recipient applied for a scholarship), and implicatures (e.g., suggesting that paying a fee is standard procedure). These unstated meanings manipulate the reader into believing the message is legitimate.
4. Emotional and Psychological Appeals
   Cybercriminals use emotional triggers such as fear (threats of account suspension), hope (winning money, receiving donations), and flattery (you deserve this) to pressure recipients into compliance. These rhetorical choices function as face-threatening acts, exploiting both positive and negative face needs.
5. Forensic Linguistic Relevance
   The study shows that scam language exhibits clear, recurring lexical, syntactic, and pragmatic patterns. These can serve as linguistic evidence in forensic investigations, helping to profile scams, trace authorship, and strengthen legal processes against cybercrime.

Recommendations

Based on the findings, the study makes the following recommendations:

1. Pragmatic Awareness in Digital Literacy
   Users should be educated on how to recognize linguistic red flags such as vague references, exaggerated promises, grammatical inconsistencies, and urgency markers in digital communication.
2. Law Enforcement Training
   Police and cybersecurity agencies should integrate forensic linguistic techniques into cybercrime investigation to interpret suspicious texts and extract evidence of fraudulent intent.

3. Linguistic-Based Detection Tools
   Automated spam filters and phishing detectors should incorporate language cues (e.g., directive overload, false presuppositions, vague deixis) alongside technical markers.
4. Collaboration Across Disciplines
   Linguists, cybersecurity experts, and psychologists should work together to understand how cybercriminals exploit human cognition through language, thereby improving both prevention and prosecution.
5. Public Education Campaigns
   Government agencies and institutions should run awareness programs highlighting common scam language features—urgent deadlines, impersonation of authority, vague personalization, and requests for sensitive data.

Conclusion

This study has shown that cybercrime is as much a linguistic problem as it is a technical one. By examining scam messages through speech act theory and implicature, it becomes clear that language is deliberately structured to deceive, pressure, and exploit victims.

Scammers manipulate meaning, intention, and context to disguise fraudulent directives as genuine promises, relying on presuppositions and implicatures to create false legitimacy. The emotional and psychological force of these messages reveals how deeply language can endanger digital safety and human existence.

Therefore, combating cybercrime requires more than firewalls and encryption. It calls for linguistic vigilance—an ability to interpret and resist manipulative language. Integrating forensic pragmatics into cybersecurity provides a stronger defense, making individuals and societies less vulnerable to deception in an increasingly digital world.

The intersection of language and cybersecurity is not merely academic but a practical necessity in safeguarding trust, dignity, and human survival in cyberspace.

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