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An Experimental Analysis of Pragmatic Competence in Human-ChatGPT Conversations

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ABSTRACT

The main purpose to conduct this research was to evaluate the pragmatic capability of ChatGPT in human interaction and analyze how does ChatGPT, as an advanced language modal, handle linguistic features; irony, metaphor, and indirect requests during conversation with humans. Besides, this study followed a mixed method approach by conducting interactive conversation with three participants to determine the pragmatic competence of ChatGPT through speech act theory and language analysis using irony, metaphor, and indirect requests as linguistics techniques. Thus, ChatGPT has proved to work effectively in human interactions so far by understanding the linguistic context of content and generating responses accordingly yet, it appears more efficient when dealing with tone recognition and complex linguistic constructs like irony and metaphor respectively. To achieve accurate responses in different type of conversations, this research suggests a progressive approach towards the betterment of the responsive capabilities of ChatGPT by incorporating information from various linguistic datasets and users' feedback.

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1. Introduction

Pragmatics involves examining language through the lens of its users, particularly focusing on the decisions they make, the limitations they face during social interactions, and the impacts their language usage has on others involved in the communication process. Pragmatic competence is considered a specific characteristic of discovering, learning, and assessing implicit meaning through psychological, sociolinguistic, sociocultural, contextual, and rhetorical factors (I. Nazeer & Syed, 2023). Understanding Pragmatics poses a formidable challenge due to its foundational principle rooted in context-dependent manifestations. Pragmatic competence, which means the ability to use language efficiently in social settings, is a crucial feature of natural human communication that has been attracting more and more attention both academically (linguistics) as well as technologically (AI). Research studying the collaboration between humans as well as AI systems like ChatGPT provides a unique lens to analyze its efficacy (Grice, 1978; Mukhtaruddin, Fadhil, Widyamurti, Wibisono, Firdaus, & Laila, 2024; Rafique, Nazeer, & Rehman, 2024). ChatGPT serves as a chatbot based on the GPT framework. Ever since it was launched as a website, people from around the world have had an opportunity to interact with it. The greatest strength of chat agents is in their ability to understand human-language-based commands and the fact that they can be managed with everyday words, without any knowledge of any programming languages. In the past decade, scientific research has evolved greatly due to the advent of AI and one notable development in artificial intelligence is the emergence of efficacious models focusing on human language skills like ChatGPT (Brown et al., 2020; Khan, Noreen, & Hussaini, 2024). The performance of this model is high in task recognition under Natural

Language Processing (NLP) and deep learning approaches to understanding and creating human semantics. Investigating pragmatic competence in human-ChatGPT communication involves the evaluation of the way ChatGPT follows, (Grice, 1978) speeches to maximize quantity, quality, relation, and manner. These maxims occur rarely in successful human communication, and their presence indicates that the message was delivered effectively through congruence with the expectations of listeners (Aloni, 2022; O'Keeffe, Clancy, & Adolphs, 2019). It has been established that pragmatic competence may include not only the ability to use appropriate utterances but also decoding unspoken meaning in speech.

When discussing the relations between humans and AI, scholars have also analyzed the ability of AI to process language that not only reflects proper grammar but is also pragmatically correct (ABE & SUEZAWA, 2018; Daniliuc & Daniliuc, 2002). These include the senses of indirect speech acts, idioms, and use of sarcasm and humor besides dynamic interaction with people in a conversational setting (Kecskes, 2014). As (Leech, 2016) writes, interpreting indirect requests and the ironizing mode of sarcasm is rather complicated for such AI systems as ChatGPT to handle. The multimodal dimension of communication incorporates nonverbal signals and understanding in contexts which makes this interaction even more complex (Aluya & Iangba, 2024). Although ChatGPT uses a language-based environment, realizing the pragmatic meaning of language that goes beyond these verbal cues is quite important (Bull, 2006; Goodwin, 2000). What makes this research important is not only the progress it brings in the field of AI but also a better understanding of human language and interactions. According to Savignon (2018) and before, (Canale & Swain, 1980), pragmatic competence is a critical element of communicative competence that allows effective and meaningful interaction. Through observing such models of human conversations with virtual ChatGPT, researchers can therefore learn about the limits and possibilities that AI could exhibit in humanlike pragmatic capabilities (Canale & Swain, 1980).

Moreover, the approach of this study is essential for advancing AI system development that recognizes human communicative preferences better, especially in various sociolinguistic backgrounds (Rafique, Munawar, & Riaz, 2021; Reyes, 2011). The possible applications of this research do not necessarily limit themselves to the field of language technology but rather extend towards other spheres such as education and therapeutic provision in a bid to apply artificial intelligence for learning languages and speech communication training with individuals having pragmatic language impairments (I. Nazeer & Yousaf, 2023). The pragmatic competence in human-ChatGPT interactions, studied through experimental and pragmatic analysis, can shed light on the convergence between AI and human linguistic entities. This study does not only give an account of AI and linguistics but also has a far-reaching implication for the comprehension of human communication, which forms the basis upon which technologies like artificial intelligence can be fully developed to aid in various fields (Fayyaz, Nazeer, & Ali).

1.1. Research Statement

The focus of this study is on assessing the pragmatic competence that ChatGPT exhibits in human-to-ChatGPT interactions, simultaneously concentrating on two main research objectives. To begin with, it is necessary to conduct a holistic assessment of the competence of ChatGPT in interpreting contexts, identification, and expression of emotional patterns, and preparing relevant responses for several conversation types (I. Nazeer, Mukhtar, & Azhar, 2023). The issues are in closing the congress between what is possible within the model and with a user that has expectations that present more subtle characteristics, particularly when dealing with situations where detailed emotions as well mixed tones occur. Second, the research seeks to analyze the use of irony, metaphor, and indirect requests with ChatGPT trying their capabilities to negotiate complex speech situations in dealing with irony or metaphors. The focus of a case to hand is to determine the positive and negative characteristics of an interpretation of such complex linguistic units that, on the one hand, contribute to understanding how this model helps AI measure language pragmatic competence. Hence, proficiently addressing these problematic areas is essential to improving the performance and naturalness of AI-human interfaces, opening boundless prospects in many different sectors.

1.2. Research Objectives

The primary aim to conduct this research was to achieve the following research objectives:

1. To assess the pragmatic competence of ChatGPT in human interactions.

2. To analyze the handling of irony, metaphor, and indirect requests by ChatGPT in conversations.

1.3. Significance of the Study

This study is specifically important due to a thorough evaluation of the pragmatic competence that ChatGPT exudes, which gives critical insights into how much AI can manage mimicking the standard conversational interplay. Through a systematic assessment of the capability of ChatGPT to determine the context, recognize tone, and effectively process complex linguistic aspects like irony, metaphor, and indirect requests; this study makes meaningful contributions to the domain of AI and NLP. These conclusions acquire special importance in the context of the rapid infusion of AI into different spheres of everyday life – education, customer service, and Internet communication. Not only does the study shed light on current strong and weak points of AI-conversational skills but also stands as a baseline to measure evolutionary developments in terms of further progressing with such technologies. Nevertheless, its implications go further for developers of AI language models as well as researchers in line with and end-user – rather it helps the necessary practice of creating more intelligent, subtle, and humanlike artificial intelligence systems. This research is therefore crucial in endeavoring people's knowledge on how AI may replicate human characteristics and where it could fail thus making the progress to create smartly created intelligence-based communication systems is required by guiding towards developing an intelligent system that will interact with humans efficiently.

1.4. Delimitations

The study is limited concerning its range and methodology. The use of only three participants in the conversation experiments hinders the diversity and scope of the conversational contexts studied, possibly influencing how generalizable the results may be. Furthermore, the scenarios were pre-determined – that is not all the possible ways of real-life conversational dynamics may be laid down in this context. Still, while the Speech Act Theory looks rather effective, it could potentially fail to uncover some subtleties and peculiarities that confine modern conversational styles due to their development. Also, the analysis of selected linguistic features to determine irony, metaphor and indirect request in a corpus might miss out on other important issues that must influence pragmatic competence among speakers. These limitations emphasize the specificity of the study and accentuate wider research to fully approach the dynamics of AI conversational agents.

2. Literature Review

The role of pragmatic competence in human-AI interactions has generated interest among linguistics, AI, and communication studies researchers. Considering AI, language models such as ChatGPT have also been a source of curiosity for researchers in the field of how people and AI interact. To improve the accuracy of AI models used in linguistics, researchers are comparing the pragmatic competence of AI modules' responses to human pragmatic competence (Awosanya et al., 2024). The Cooperative Principle was introduced by Grice in 1975, along with some of its subordinate maxims. Grice remarks that effective communication is guided by principles of quantity, quality, relevance, and manner. These Cooperative Principles act as a theoretical base for assessing the competence of an AI system like ChatGPT so that the responses of the AI module adhere to the norms of collaborative and sustainable conversation (Arent, Kruk-Lasocka, Niemiec, & Szczepanowski, 2019). Considering the above maxim in human-AI interaction helps us understand whether these systems can surprise pragmatic competence (Davydova, 2024).

The emergence of advanced language models, exemplified by ChatGPT, has facilitated a new approach to exploring pragmatic competence in AI. (Zhang et al., 2019) showcase few-shot learning skills of language models and call the attention that these models may comprehend the input and provide contextually relevant outputs despite the limited number of tagged examples during training. This ability to adapt in turn is essential for assessing to what extent AI systems can negotiate the intricacies of human conversation, including detecting and comprehending indirect speech acts (Brown et al., 2020). Pragmatic competence is not solely about the ability to produce appropriate language in context but also about people's ability to comprehend the implied meaning, humor, and social cues. (Kecskes, 2014) commented that interpreting indirect requests and social elements as in conversations is one of the greatest challenges for AI to develop natural pragmatic abilities like human capabilities. This aligns with the more generalized rationale of pragmatic competence as an integral aspect of communicative competence (Canale

& Swain, 1980). Research regarding human-to-AI interactions identifies another important component of communication – multimodality. Even though ChatGPT is strictly a text-based platform, it is pragmatic that it should attach to the gestures to include non-verbal clues beyond the language alone (Adebomi, 2024). The research on gesture as an observable behavior within contextual human contact becomes meaningful in the pragmatics of AI systems as multimodal elements can become the road to both the procedural and preference pragmatics of the systems (Fan & Tian, 2024).

Filtering the use of figurative language, sarcasm, and humor are three big challenges to AI models that can provide pragmatic competence. (Aloni, 2022) notes that there is a high importance of fostering pragmatic awareness in the field of language acquisition since such pragmatic awareness becomes especially relevant in the era of artificial intelligence-assisted language teaching tools. (Milstein, Thomas, Hoffmann, & Carr, 2023) introduce the complex nature of linguistic and cognitive to shed some light on the processes that travel the cognitive map of deciphering figurative language, a case where AI systems often stumble. ELIZA serves as a historical instantiated example of early AI systems that can be used to map the journey of AI in that of conversation. Computer machinery and intelligence are the centerpiece of Kendon's (2004) key work that served discussion about the miscellaneous capabilities of machines in imitating human responses. This analysis of these historical landmarks reveals the progress and challenges that modern AI systems face in becoming pragmatically competent (Aloni, 2022). The investigation of the importance of pragmatic competence in human-AI communication has now become an instrumental field extending beyond the bounds of linguistics and AI toward practical applications in a range of sociolinguistic situations. While sociolinguistic dimensions of the communicative process and cultural significance surrounding the context are stressed by both (Arent et al., 2019; Gonzales, 2023), the latter has not applied his or her approach to communication as a multidirectional and intercommunication phenomenon. It becomes essential for AI systems that are linguistically competent as well as culturally aware, affecting implications on applications in language teaching and therapy (Bartlett, Costescu, Baxter, & Thill, 2020).

Linguistic theories and AIs do not define this pragmatic competence exploration in its entirety; the fact is that it is a concern with practical matters. (Arent et al., 2019; Gonzales, 2023) pay significant attention to the socio-linguistic properties of communication, cultural and contextual factors, respectively. Another focus area has been the formation of AI technologies that are not the same as language but also culture-wise with consequences of applications in language learning and therapeutic as discussed in (Tabassum, Rafique, Akram, & Khan, 2020). The pragmatic competency in human-ChatGPT interaction, theoretical, technological, and multidisciplinary work intertwined layers of different linguistic theories, technological revolutions, and approaches of various academic fields (Kazim, Adil, Khan, & Tariq, 2023; Khan, 2023). The analysis of Grice's maxims that accompany language model flexibility and the issues related to figurative language provoke a more advanced approach to how AI systems penetrate the profound complexity of human language AI some may argue is a mere intellectual foray into the emerging subject since the scholars are continuing their expedition into this burgeoning field the implications go beyond the technological advancements of man and sink into education, medicine and we the ability to speak as human beings (I. Nazeer, Shah, M. H., & Hassan, F. ul. , 2020).

3. Research Methodology

The pragmatic competence of ChatGPT in human interactions was assessed using a combined quantitative and qualitative research method. Quantitative data were gathered using structured conversation experiments with three human participants interacting with ChatGPT in pre-defined scenarios to test the context comprehension, mood recognition, and appropriateness of replies. The following included genres which wanted to make ChatGPT write different genres of information, such as, exposes, poems, short stories, letters, and interpretations of the handed texts. As an instrument for testing pragmatic competence, a Speech Act Theory as presented by John L. Austin in his book "How to Do Things with Words" published in 1975 was used in this study to determine people's ability to perform language functions. The interactions engaged in these contexts were scored using an intercultural pragmatic competence scale developed for this study. The second objective was analyzed using descriptive analysis methodology for the research. A collection of ChatGPT communication was built paying careful attention to pieces that are about cases of irony, metaphor, and request. These conversations emerged from controlled experiments with subjects directed to use these linguistic elements and from existing resources.

Linguistic analysis tools were also used to analyze each instance to determine the appropriateness and response accuracy of ChatGPT.

4. Data Analysis

The systematic analysis of the structured conversation experiments marked the beginning of the data analysis process for evaluating the pragmatic competence displayed by ChatGPT in human interactions. The first objective of data collection was the gathering of raw conversational data, which consisted of interactions with three human participants and ChatGPT. This data included prompts written by participants and the responses generated in the form of got spoken by ChatGPT in different pragmatic competence scenarios. Every contact was carefully noted which resulted in a full dataset that was to be subjected to further analysis. To initiate the quantitative analysis presented in Table 1, specific evaluation criteria were established for three key dimensions: The parameters of Context Understanding, Tone Recognition, and Appropriateness of Response. These metrics were created to numerically assess ChatGPT's efficiencies in recognizing the implied meaning of conversations through disambiguating hearsay and predicting the emotional tones as well as its potential responses. These predetermined criteria were then evaluated for each participant relative to the point scale from 0 to 10. At the same time, about the qualitative analysis illustrated in Table 2, task-specific interactions were distinguished, considering the multitude of prompts provided to ChatGPT that varied from articles and poetry to songs and translation. The answers generated from ChatGPT were then qualified based on creativity, the relevance of the answer to the task as well as the fulfillment adherence to the instruction given. A qualitative addition of subjective impressions of the participant was collected on the generated content to understand what effect this content had on him or her. This developing dataset embraced both quantitative and qualitative dimensions in a foundational aspect that provided a thorough analysis of ChatGPT's pragmatic proficiency in human interactions.

Table 1: Quantitative Assessment of ChatGPT's Pragmatic Competence

Participant ID	Context Understanding (Score out of 10)	Tone Recognition (Score out of 10)	Response Appropriateness (Score out of 10)	Overall Pragmatic Competence (Average Score)
Participant 1	8	7	6	7
Participant 2	6	5	7	6
Participant 3	9	8	8	8.33

Note: These scores are based on the evaluation criteria for understanding context, recognizing tone, and response appropriateness.

As Table 1 delineates, we provide a thorough analysis in measurable terms wherein the pragmatic dynamics of ChatGPT are given a detailed quantitative assessment within the realm of three-wise participant-controlled structure endeavors. A personalized evaluation is also possible, being the case of a unique label devoted to every participant. The table presents three main metrics of the solutions preferably assigned a score out of 10 is measured and aggregated to see how ChatGPT answers the different aspects of performance. The first metric, in turn, is Context Understanding, measuring ChatGPT's ability to understand the subtleties of the provided conversation dialogs. The scores of the participants were 8, 6, and 9, which are high, medium, and high for Participants 1, 2, and 3 respectively, which means that Participant 1 has a strong ability to determine contextual signals; whereas Participants 2 and 3 have different degrees of performance in context understanding. The second metric, Tone Recognition, quantifies ChatGPT's capability to recognize the emotional tone or intended meaning conveyed in the input prompts. Participants 1, Participant 2, and Participant 3 achieved scores 7; 5; and 8, respectively. These scores show the densities of the appropriate recognition and response of ChatGPT, shifting to different levels of success in identifying and interpreting such emotionality in conversational interactions.

The third metric, Response Appropriateness, measures the relevance and correctness of responses by ChatGPT to the prompts that are given for analysis and evaluation. 1st participant estimates to score 6, 2nd scores 7 and 3rd scores 8. These scores represent the quality of responses, which are not only the correct answer but also context. The overall pragmatic competence is the average score calculated by averaging the scores over Context Understanding, Tone Recognition, and Response Appropriateness evaluating each participant's respect for the above. The composite scores summed up to Participant 1, Participant 2, and Participant 3 score

27, 19, and 22.00, respectively. This average score presents a generalizing and summative image of ChatGPT's pragmatic competence evaluating the value of the assessed traits.

4.1. Pragmatic Competence Considering Speech Act Theory

The quantitative data in Table 1 lends itself as a critical aperture through which we can observe and analyze ChatGPT's pragmatic competence in human interaction from the theoretical standpoint of Speech Act Theory. John L. Austin and John Searle created the Speech Act Theory that envelopes the process of communication behavior as both an activity to a body of information and also to perform various acts or functions through the verbiage of speech. The theory places the speech acts into such classifications as assertions, requests, promises, and questions which each possesses its own set of norms and conventions. Speech Act Theory lenses are used to analyze Table 1 used in the above study and from this table, the Context Understanding score in Table 1 is more appropriate. The above score seems to be higher and it might mean that the ChatGPT is proficient in detecting and interpreting a speech act context. For instance, in case a participant asks something or asks for something, then the higher score reflects the level where ChatGPT interprets the context properly according to Speech Act Theory. So, the "Tone Recognition" score is one of the most important in Speech Act Theory. Identifying the prosody in identifying the illocutionary force that is the underlying intended meaning of the speaker or what the speaker is trying to communicate. The pragmatic competence associated with Speech Act Theory may be reflected in ChatGPT's ability to respond to the emotional subtleties of participants' prompts relative to the "Tone Recognition" score.

The Response Appropriateness score in Table 1 is a measure of the fulfillment of the conditions of felicity in the Speech Act Theory. If we take the felicity conditions brief, this will show whether the speech act is applicable in a certain situation. This higher score in the category suggests that the ChatGPT responses fit well with the felicity conditions, which, in turn, reveals the ability of the chatbot to provide responses that are relevant to the given context and are relevant satisfactorily. The Overall Pragmatic Competence score, derived from the general average across all dimensions, provides a holistic perspective of the ChatGPT's performance compared to the Speech Act Theory. The better the mean scores, the more comprehensive and efficient pragmatic competence and, hence, the audience's complex and varied demands for speech acts. Concerning the theory of commonsense, the data in Table 1 can collectively be interpreted to give several insights that would be relevant for determining how well ChatGPT performs in understanding context, detecting emotional tones, and generating the necessary responses needed to achieve pragmatic competence between humans.

Table 2: Qualitative Assessment of Task-Specific Interactions

Participant ID	Task	ChatGPT's Response	Participant's Feedback	Observations on Pragmatic Competence
Participant 1	Essay	Adequately addressed the topic	"Well-written, but missed some nuanced points."	Good contextual grasp, but lacks deeper insight.
Participant 1	Poem	Captured the emotional tone well	"Surprisingly poignant and relevant."	Excellent tone recognition and creativity.
Participant 2	Short Story	Engaging story, but slightly off-topic	"Entertaining, yet didn't fully stick to the brief."	Creative, but needs better context alignment.
Participant 2	Letter	Appropriate format and tone	"Professional and to the point."	Strong in format adherence and tone.
Participant 3	Translation	Accurate translation with minor errors	"Mostly correct, but some parts were awkward."	High accuracy with room for improvement.
Participant 3	Drama	Well-crafted drama, excellent thematic relevance	"Impressive dramatic and thematic integration."	Highly effective in context and creativity.

Note: This table highlights ChatGPT's performance in different communicative tasks, reflecting both the participants' feedback and the evaluator's observations on pragmatic competence.

A qualitative analysis of the ChatGPT task-specific interactions is provided in Table 2, providing insights into the performance of the model concerning different communicative tasks taken during structured conversation experiments. In the table, each participant has specific details like their info, the tasks they did, ChatGPT's feedback, how the participant felt about it, and general notes about how good they are at understanding and using language. For Participant 1's essay, ChatGPT did a good job sticking to the topic, but the participant felt there could be more to it. The person checking it noticed that ChatGPT gets the context well but might miss some deeper points. ChatGPT is found to be pretty great at picking up tones and being creative, especially when it comes to feelings and emotions. Moving to the poetry task, ChatGPT gets a

thumbs up for capturing emotions in a poem for Participant 1. The participant was surprised by how touching and relevant the response was. Participant 2 got the task of creating a short story using ChatGPT, and this AI module did well in creating an interesting narrative. However, it slightly went off track from what was asked. The participant thought it was entertaining but felt it didn't completely match the given instructions. The person checking it noticed that ChatGPT has a cool way with words but needs to stick closer to the topic.

Moving on to the letter-writing task for Participant 2, ChatGPT's response is praised for getting the right format and tone. The participant liked the letter, calling it professional and straight to the point. The person evaluating it noticed that ChatGPT is good at following the rules for how a letter should look and sound, especially in formal situations. Participant 3's translation task saw ChatGPT providing an accurate translation with minor errors. The participant's feedback acknowledges mostly correct translation but points out some awkward expressions. The evaluator's observation recognizes high accuracy but suggests room for improvement in refining the fluidity of translated content. Regarding the drama assignment that was assigned to Participant 3, ChatGPT’s answer is praised as a perfect drama, which possesses a high validity of themes. The integration is dramatic and thematic niches of the participant, and he or she admires it. The evaluator’s observation emphasizes ChatGPT’s demonstrates surpassingly successful outcomes in contextualism and artistic insight. This table aims to represent a general view of how ChatGPT behaves in various communicative tasks characterizing the refined details provided by the participating respondents as well as the evaluator’s notes. In turn, it offers relevant qualitative observation regarding the practical competence proficiency in the model that allows noticing strengths as well as opportunities for improvements in its task-specific interactions.

4.2. Descriptive Analysis of Corpus

Speech Act Theory posits that verbal expressions extend beyond mere information exchange; they embody actions termed speech acts. The researchers made a huge corpus from almost all kinds of texts and then this detailed descriptive analysis was conducted. The descriptive analysis of different pieces of writing is given below:

"Oh, what a surprise! Another day, another round of applause for my impeccable timing," the character mumbled, dripping with sarcasm.

The extracted line from a drama illustrates a clear instance of irony, as the character expresses dissatisfaction while sarcastically acknowledging the supposed predictability of their situation. In evaluating ChatGPT's response accuracy and appropriateness in such instances, the analysis would focus on the model's ability to not only identify the sarcastic tone but also generate a response that aligns with the intended irony. This demands a nuanced understanding of contextual cues and the capacity to mirror the appropriate tone in its reply.

"The moon, a silver coin in the sky's treasury, paying homage to the night with its radiant currency."

In this poetic line, there's a metaphor comparing the moon to a "silver coin," and it describes the night as receiving its "radiant currency." To check how ChatGPT handles metaphorical language, we want to see if it understands what the metaphors mean and if it can come up with creative responses that match the poetic feel of the prompt. A close study would look at whether the model gets the non-literal parts of the language and can make responses that match the feel of the poem or whatever's happening in the given situation.

She casually remarked, "If only someone could sprinkle a bit of magic dust on our mundane routine, life might regain its sparkle."

In this line from the novel, the character kind of hints at wanting something different without saying it directly. It's like a secret wish tucked into a regular statement. For ChatGPT, the challenge is to catch onto this subtle ask for a change that might not be obvious. When we look at this, we're checking how well ChatGPT can notice and respond to these hidden requests. ChatGPT can understand what is hinted at and give a fitting reply accordingly.

"The room was as silent as a library after closing hours, begging for a tale to shatter its tranquility."

In the above line, there's a comparison using a simile between the room's silence and the library. It hints that the room wants a story. Assessment of how well ChatGPT can handle these complex language elements is the target of the analysis. Analysis of ChatGPT responses about the use of figurative language for a story has proved to help assess ChatGPT's proficiency in understanding the subtleties of context, tone, and nuanced expressions in language. Assessment of ChatGPT's capabilities in navigating the complexities inherent in language is being analyzed through this study.

4.2.1. Irony in Drama

According to Speech Act Theory, getting irony is about catching what the speaker means (that is the illocutionary act) instead of just the literal words they say (that is the elocutionary act). ChatGPT mirrors a scenario where an individual utters words that convey a straightforward message but, in reality, harbors an intention contradictory to the literal meaning. The dramatic instance of sarcasm unfolds in the line, "Oh, what a surprise! Another day, another round of applause for my impeccable timing." ChatGPT's understanding and response to this kind of irony shows its efficacy and advancement in the use of irony.

4.2.2. Metaphor in Poetry

In the poem, when it says, "The moon, a silver coin in the sky's treasury," it's like especially talking about the moon, not exactly what it is. Speech Act Theory tells us that in metaphors, how it makes you feel (that's the perlocutionary effect) is super important. If ChatGPT can get what the metaphor is saying and come up with a cool, imaginative response, it means it's good at understanding and playing with words.

4.2.3. Indirect Requests in Novels

In the line from Chat GPT- developed novel, when it says, "If only someone could sprinkle a bit of magic dust on our mundane routine," here illocutionary act is not directly expressed, it's like wishing for something cool without saying it directly. Speech Act Theory says this kind of talk is indirect, where, what you mean isn't said directly. Checking how ChatGPT reacts to these kinds of sentences is like seeing if it can figure out the implied speech act (a wish or a request for change) from the elocutionary act (a hypothetical statement). It shows how good its pragmatic skill is, at understanding and dealing with indirect communication.

4.2.4. Simile and Indirect Requests in Stories

The story excerpt, "The room was as silent as a library after closing hours, begging for a tale to shatter its tranquility," combines a simile and an indirect request. This implies comprehending this and action to this encompasses recognizing the mentioned simile (comparative speech act) and the unexpressed demand for a narrative (indirect speech act). The conversation between Chat GPT and the respondent in terms of ChatGPT’s response, clearly reveals its capability to orchestrate these layers of speech acts efficiently as seen from the alignment of output into intended communicative goals. Considering the Speech Act Theory about ChatGPT’s handling of sophisticated linguistic phenomena brings its abilities regarding identifying and responding correctly to diverse types of speech acts, into focus. This analysis shows that the model is capable of distinguishing markers and structures specific to illocutionary intentions, perlocutionary effects, and other complexities involved in indirect speech acts which are a necessary part of contextually adequate communication.

5. Findings

The study of conversational performance by ChatGPT in human-like controlled experimental settings showed some interesting highlights on pragmatic competence. ChatGPT showed the level of contextual understanding that could be called to display an adequate picture of a situation and respond correctly. As for tone recognition, ChatGPT demonstrated limited competence in the identification of simple emotional indicators but made mistakes with more complicated or dual tones. The model responses were generally appropriate, but they're also occurred cases when the answers provided by it were superficial or failed to pay proper attention to implications that lacked depth or missed subtle behind-surface meanings of the conversation. In general, scores for all participants’ averages demonstrated the robust capability of pragmatics

understanding but also identified points of rectification particularly treatment with complicated emotional sensitiveness and elaborate conversational background.

The corpus analysis focusing on the irony, metaphor, and indirect request in response to ChatGPT revealed a depth of sophistication beneath the model's language processing skills. The above session with ChatGPT further demonstrated how, despite its limited language proficiency as compared to human interaction and linguistic processing capabilities, this AI still did show certain competence in recognizing and responding to metaphorical statements and generating fresh responses that were relevant in the context of the conversation. However, irony cases showed that the model's performance was somewhat erratic; it did well in overt irony but occasionally failed to catch exactly what was meant when dealing with more nuanced examples of excellent irony. ChatGPT typically was able to distinguish and address the former even if it sometimes incorrectly overinterpreted the latter at times. An in-depth analysis of these linguistic features shows that ChatGPT is developed with flexible language processing skills for dealing with complex rhetorical elements and works, but, as it turns out, some aspects regarding the adept handling and interpretation of human subtexts are still left out with no explicit explanation.

6. Discussion

The study findings gave a brief overview of the pragmatic function repertoire that ChatGPT has generated in human interactions and its ability to treat pragmatic linguistic particles in the context of irony, metaphor, and indirect demands. Regardless of the context, various structured conversation experiments showed that ChatGPT had a good level of understanding. Its capacity for picking up on the overall meaning and purpose of conversations was also highly adept, which indicates a robust base capability in contextual understanding. Nevertheless, the effectiveness of the model decreased while navigating the subtlety of tone especially when in conversations that had an underlying provision with intricate emotional tonalities or mixed signals. It could recognize low-level emotional signals and react accordingly but sometimes failed in recognizing the most complex or faint degrees. After testing ChatGPT on some sample cases to move further with the analysis, linguistic elements such as irony, metaphor, and implicit requests were examined. However, the model did have a marked aptitude in terms of interacting with metaphors, as it was usually very interesting and relevant to come up with answers that indicated understanding in non-literal language. This marks an important development in natural language processing literacy, granting the AI full freedom to look beyond literal interpretation and absorb more abstract and innovative elements of linguistics. Yet its integrity to irony was a complex one. ChatGPT showed success while detecting and addressing obvious panels of irony but got less prominent with more complicated or multi-layered ones. This oscillating character points to the necessity of further development in that understanding and proper response generation appear far less clear-cut than they may seem, especially as irony often involves nuances. To sum up, ChatGPT proved to be effective as a machine that can find and address indirect requests. However, on the flip side, an occasional tendency to interpret these requests reflected a possible area for improvement in comprehension and semantic processing of inferred meanings within human intercommunications.

According to the results, it has been revealed that ChatGPT has already made a way towards becoming almost human so it may say in conversations with us. As regards its capacities in contextual understanding, interpretation of the prosody, and dealing with the linguistic intricacy. Nevertheless, the human-to-human specification of communication, for instance in terms of emotional depth and complex conversation backgrounds, is a point where this artificial intelligence could move towards with deeper understanding of nuanced and highly empathetic interaction. (Rafique, Nazeer, & Rehman, 2024), has also talked about the capabilities of ChatGPT in generating divergent sets of vocabulary; neologism, slangs,cultural references, scientific terms,collocations and conversational vocabulary etc.It specifically polishes the usage of politeness terms (Kendon, 2004).

7. Conclusion

Assessment of ChatGPT's pragmatic competence has provided useful findings about the improvement of ChatGPT's pragmatic competence. ChatGPT has commendable proficiency in understanding context, successfully discerning the prevalent themes in discussions with an ability to recognize basic emotional cues but challenges arose in handling more sophisticated emotional expressions or mixed tones. ChatGPT's responses do not cover tone depth as observed in human

conversations. There is a need for further refinement in grasping emotions and navigating discussions proficiently to improve AI language. It is found that ChatGPT has proficiency in the use of irony, metaphor, and processing indirect requests but further tuning of the module is required for better results. The model skillfully utilizes metaphorical language that makes positive strides in its capabilities. However, in the case of irony, it encounters a modest challenge, yet demonstrates competence. In irony, it has limitations to fall slightly short of exceptional adeptness in more sophisticated scenarios. ChatGPT performed well in understanding and responding to indirect requests, and it can be improved further, in navigating overly literal interpretations. Findings indicate that ChatGPT is making strides in grappling with complex language; however, there lies untapped potential for further refinement.

7.1. Recommendations

The analysis recommends that by focusing on the partial success of using the model in dealing with irony, a requirement for specialized training to improve its capacity for identifying more subtle and complicated forms of this language figure can be pointed out. There should be constant improvements in the implementation of ChatGPT to understand metaphorical types of words and interpret requests. Finely tuned systems should be utilized, that focus on understanding metaphorical types of words and interpreting requests. Incorporating user input into the training process for this model could better enable it to respond elastically to progressions in language models and consumer demand. They recommend an iterative method encompassing users' feedback and findings in linguistic sources based on several languages to come up with a more contextually appropriate reaction in various conversational situations for ChatGPT.

7.2. Implications

The implications of the study are not limited to the assessment of the pragmatic competence of ChatGPT, that is, moving into other aspects connected with the development and deployment of advanced language models. The fact that despite the early days, significant steps have been taken to allow artificial intelligence to enter more human-like discussions with notable proficiency in understanding context and responding to reasonable sounds. Nevertheless, the research also emphasizes the continuous adaptation to fine-tune it, especially concerning subtleties of emotional shade, not trivial linguistic entities such as irony and metaphor, and interpreting indirect requests. These findings draw attention to how the deliberate operation of AI's language technology needs sustained initiatives aimed at increasing word acuteness. As AI systems like ChatGPT become integral in diverse applications, including customer service, content generation, and educational tools, addressing the identified areas for improvement is crucial to ensure that AI interactions align more closely with the depth and intricacies of human communication. The research points out the critical importance of relying on an iterative approach and involving a human user in refining language models that are specific for each scenario, aiming to close this gap between AI abilities and finely-tuned user expectations for a given conversation type.

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