The Sociolinguistics of Machine Talk: Identity, Power, and Language Use in AI Interfaces

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Abstract

Recognizing the rapid revolution in Artificial Intelligence (AI) and its impact on human life, there is an increasing need to shed light on this phenomenon. Accordingly, this paper proposes a framework for examining the sociolinguistic variables, like of identity, power, and language use in relation to AI interfaces – ChatGPT as an example. It aims at: identifying how AI constructs social identities through linguistic strategies; shedding light on the power relations that appear in H-AI discourse; and recognizing how AI employs politeness strategies to maintain solidarity and mitigate face threats; and showing out how social variables, like sex and age, affect identity construction . In relation to these aims, this paper hypothesizes: AI constructs social identities through using some linguistic strategies, like politeness strategies, social varieties, social variables, and contextual persona shift; some power relations that might appear in H-AI discourse which could affect the whole process of communication, like human dominance, language ideologies, and gendered power; AI systematically employs positive and off-record politeness strategies to maintain solidarity and mitigate face threats; and sex and age, as social variable, significantly affect identity constructions to show how identity differs according to whom use AI. After presenting the theoretical framework, this paper analyzes some conversational extracts taken from random users. Finally, the paper presents conclusions that align with the proposed hypotheses.

Keywords: sociolinguistics, power, identity, politeness, language use, AI, ChatGPT

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دراسة اجتماعية لغوية لحديث الالة: الهوية و السلطة و استخدام اللغة في تطبيقات الذكاء الاصطناعي

المستخلص

في ظلّ الثورة السريعة في مجال الذكاء الاصطناعي (AI) وتأثيره على حياة الإنسان، أصبحت هناك حاجة متزايدة لتسليط الضوء على هذا الظاهرة. وبناءً على ذلك، تقترح هذه الدراسة إطارًا لدراسة المتغيرات المتعلقة بعلم اللغة الاجتماعي، مثل الهوية والسلطة واستخدام اللغة و ربطه بتطبيقات الذكاء الاصطناعي – ChatGPT مثالًا. تهدف الدراسة إلى: تحديد كيفية قيام الذكاء الاصطناعي ببناء الهويات الاجتماعية من خلال الاستراتيجيات اللغوية؛ إبراز علاقات القوة التي تظهر في خطاب الإنسان والذكاء الاصطناعي؛ و التعرف على كيفية توظيف الذكاء الاصطناعي لاستراتيجيات المجاملة للحفاظ على التضامن وتخفيف تهديدات الوجه؛ و بيان كيف تؤثر المتغيرات الاجتماعية، مثل الجنس والعمر، في بناء الهوية. وفي ضوء هذه الأهداف، تفترض الدراسة ما يلي: يبني الذكاء الاصطناعي الهويات الاجتماعية من خلال استخدام بعض الاستراتيجيات اللغوية مثل استراتيجيات المجاملة، والمتغيرات الاجتماعية، وتبدّل الشخصية السياقية؛ قد تظهر بعض علاقات القوة في خطاب الإنسان والذكاء الاصطناعي، والتي يمكن أن تؤثر في العملية التواصلية برمتها، مثل هيمنة الإنسان، والأيديولوجيات اللغوية، والسلطة المُجندرة؛ ايضا، يوظّف الذكاء الاصطناعي بشكل منهجي استراتيجيات المجاملة الإيجابية وغير المباشرة للمحافظة على التضامن و التأدب؛ و يؤثر الجنس والعمر، بوصفهما متغيرين اجتماعيين، بشكل كبير في بناء الهوية لإظهار كيف تختلف الهوية تبعًا لمستخدمي الذكاء الاصطناعي. وبعد عرض الإطار النظري، تم تحليل عددًا من المقاطع الحوارية المأخوذة من مستخدمين عشوائيين. وأخيرًا، تقدّم الدراسة الاستنتاجات التي تتوافق مع الفرضيات المقترحة.

كلمات مفتاحية: علم اللغة الاجتماعي، القوة، الهوية، التأدب، استخدام اللغة، ذكاء اصطناعي، ChatGPT

1. An Introduction

As artificial intelligence (AI) becomes increasingly integrated into everyday communication, the language it generates commonly referred to as *machine talk* warrants closer sociolinguistic examination. Machine talk, whether in the form of text (e.g., chatbots like ChatGPT) or speech (e.g., voice assistants like Siri or Alexa), mirrors human linguistic patterns but is ultimately crafted by programmers and interpreted by users. This theoretical framework draws on key concepts in sociolinguistics, and to explore how identity, power, and language use are constructed and negotiated in human-AI interaction (henceforth: H-AI interaction). Due to these remarks, the study tries to find answers to the following questions:

1. How does AI construct a flexible context-dependent identity through using some linguistic strategies?
2. What are the power relations that might appear in H-AI interaction?
3. How can AI employ strategies of politeness while responding to H- users?
4. How does sex and age of H-users affect identity construction?

To answer these questions, the study aims at:

1. Identifying how AI constructs social identities through linguistic strategies, e.g., pronoun use, sentence moods, and politeness.
2. Shedding light on the power relations that appear in H-AI interaction.
3. Recognizing how AI employs politeness strategies to maintain solidarity and mitigate face threats.

4. Showing out how social variables, like sex and age, affect identity construction.

In accordance with these aims, the study hypothesizes the following:

1. AI constructs social identities through using some linguistic strategies, like pronoun use, sentence moods, and politeness.
2. Some power relations that might appear in H-AI discourse could affect the whole process of communication, like human dominance and power.
3. AI systematically employs positive and off-record politeness strategies to maintain solidarity and mitigate face threats.
4. Sex and age, as social variable, significantly affect identity constructions to show how identity differs according to whom use AI.

As for the limits of the study, it is limited to H-ChatGPT interaction. ChatGPT is selected for some reasons. First, it is easy to use by most users. Second, it has free and paid versions, so anyone can use it. Third, it is trendy and provides several AI services.

Last, the study is hoped to be valuable for those who have interests in linguistics, sociolinguistics, and domains that have relations to Artificial Intelligence.

2. An Overview: Sociolinguistics

Historically , the word sociolinguistics was apparently already coined in 1939 in the title of an article by Thomas C. Hudson, Sociolinguistics. When sociolinguistics became popularized as a field of study in the late 1960's, there were two labels, first sociolinguistics and second sociology of language for the same phenomenon, the study of the intersection and interaction of language and society. These two terms were used interchangeably. More accurately, sociolinguistics is the branch of linguistics that examines how language use is shaped by and reflects social structures, cultural norms, and interpersonal relationships (Holmes & Meyerhoff, 2017). To put differently, it investigates how variables such as identity, power, gender, age, and social context influence both the form and function of communication . In the emerging domain of machine talk the interaction between humans and AI interfaces- sociolinguistics provides valuable tools for analysing how language is co-constructed between human users and artificial agents (Wardhaugh &Fuller, 2021).

2.1 Identity in Machine Talk

Sociolinguists argue that identity is not static but performed through language. Bucholtz and Hall (2005) propose a sociocultural linguistic approach, viewing identity as emergent from interaction, where speakers (or in this case, interfaces) are indexed by features such as tone, formality, lexical choices, and gendered expressions.

Bucholtz & Hall (2005) add in such interactions, identity is negotiated through the linguistic choices of both the user (e.g., style, register, code-switching) and the AI, which often adopts a programmed persona through voice, tone, and vocabulary. By studying the sociolinguistics of machine talk thus reveals how identity, power, and language intersect in technologically mediated communication, offering insights into both the replication and transformation of human sociolinguistic patterns in AI discourse.

2.2 The influence of social variables on Machine Talk

By studying the sociolinguistics of machine talk thus reveals how social variables like identity, power, and language intersect in technologically mediated communication, offering insights into both the replication and transformation of human sociolinguistic patterns in AI discourse. As a result there are some social variables that have occupied important positions in order to reveal identity of users (Eckert, 1997).

2.2.1. Age

In H-AI interaction, age plays a significant role in shaping and revealing linguistic identity, influencing both how users interact with AI and how AI systems are designed to respond. From a sociolinguistic point of view, age-related language patterns including vocabulary choice, syntax, pragmatics, and technological familiarity signal generational identities and position users within certain social categories. AI interfaces, in turn, reflect and often reinforce these age-indexed norms, shaping the dynamics of power and communication (Eckert ,1997).

According to Coupland (2003), age is a crucial sociolinguistic variable that shapes how individuals construct, perform, and reveal identity even when interacting with non-human entities like AI. Age-related identity is not revealed merely by stating one's age, but rather through linguistic style, digital literacy, cultural references, and interactional behavior. In human–AI interfaces, different age groups tend to engage with language in distinct ways, reflecting generational identity, technological familiarity, and social roles . However, there are classifications of age into identity-related categories relevant to AI interaction:

i) Younger users often employ slang, emojis, abbreviations, and informal syntax when chatting with AI (e.g., "yo AI, what's up?").

ii) Older users tend to use more formal, polite, or structured language, and may also express more caution or uncertainty with digital systems.

2.2.2 Power

Bourdieu (1991) states that in sociolinguistics, power refers to the ability of individuals or institutions to influence, control, or shape communication, meaning, and social relations through language. In the context of machine talk the interaction between humans and AI interfaces power is not only exercised by humans over machines (through programming and input) but also by machines over humans, as they set conversational frames, control access to information, and project authority.In machine talk, power emerges in forms: 'Interactional' who controls turn-taking and topic shifts. 'Epistemic' who is positioned as the "knower" in the exchange definition: control over what counts as valid knowledge, who is seen as a credible source, and how certainty is expressed . Within the influence of power on machine talks, there are two forms of power : explicit power is expressed explicitly and forcefully eliciting fear, submission, and compliance. On the other hand, implicit power is exercised through sarcasm ,silence , and audience manipulation.

2.2.3 Sex

Gender plays a pivotal role in how identity is revealed, constructed, and negotiated in human-AI interaction. In sociolinguistics, language is a key site for performing gender, and in AI interfaces (like voice assistants or chatbots), both users and AI systems participate in these performances often in ways that reinforce existing social norms and power structures. The linguistic choices users make (and the assumptions embedded in AI systems) reveal, reflect, or challenge gendered identities. The following tendencies appear even when users are interacting with non-human interfaces, indicating that users project gendered identities into machine communication Tannen(1990). These patterns reflect gender socialization in language use and reveal how users construct their gendered identities even with non-human interlocutors:

i) Female users may use more politeness markers, mitigation, or affective language. Women are more likely to use politeness strategies, hedging, inclusive language, and emotional expression A female user might say to a virtual assistant: "Hey Siri, could you please set a reminder for my meeting at 3 p.m.?"

ii) Male users may use more directives, abbreviations, or assertive language. Men often prefer directives, assertive tone, and minimal responses like "Set a meeting reminder. 3 p.m." (Holmes, 1995).

2.3 The Role of Politeness in Revealing Identity through Machine Talk

Politeness Theory (Watts 2003) is a theory that appeared several years ago within the framework of the pragmatic approach in linguistics. Today, studies about politeness are conducted in different fields. Models of politeness have been applied in different disciplines, including social psychology, sociology, cultural studies, and artificial intelligence. Politeness is defined as a universal social norm in human interaction resulting in an appropriate behavioral pattern expected from people in different contexts and situations. The effects of politeness within interpersonal relationships have been extensively studied by several social psychologists, anthropologists, and sociologists (Goffmann, 1967).

According to Brown and Levinson (1987) , there are many ways for one to commit a face threatening act with a specified weight. The following are the super-strategies for mitigating face threats ranked by the increasing politeness demanded:

i) Direct Request or Bald on Record : A speaker performs a request baldly and does not try to minimize the threat to the hearer's face. Direct Request tends to contain an imperative without mitigation. They are brief, avoid ambiguity, and communicate no more than necessary. For example, a speaker who wants the door opened might say open the door. Direct Requests are performed when the speaker has significantly more power than the hearer or when the threat is minimal.

ii) Indirect Request or off Record strategy : the speaker makes the request vaguely and uses indirect language. Hearers' faces are protected if they can retreat behind the literal meaning of the words, and speakers can save face by saying that they have not committed an FTA. By relying on the literal interpretation of words, the listener is shielded from a face threat, while the speaker can also deny committing an FTA.

2.4 Features of Machine Talk

According to Bucholtz & Hall (2005) language use is the primary mechanism through which identity and power are performed, negotiated, and reproduced in human AI interactions , to be more accurate there are such features which are reflected talking with Machine :

1. Programmed constraints : vocabulary, grammar, and tone shaped by designers and training data.

2. Adaptive variation : some AI models adjust style based on user input or context.

3. Interactional asymmetry: turn-taking and repair sequences are often controlled by system limitations.

4. Persona projection: voice, phrasing, and politeness create an impression of personality or role.

5. Cultural embedding : reflects norms from training data, which may privilege certain linguistic forms or cultural perspectives.

3. Methodology of the Study

This section is mainly concerned with research design, data collection, and the synthesized model of the study.

3.1. Research Design

The current study employs a mixed-methods approach that combines both qualitative and quantitative analyses, in accordance with its research questions and hypotheses outlined in the introduction. The qualitative analysis seeks to connect the textual characteristics of machine talk with sociolinguistic variables such as power and identity. Meanwhile, the quantitative analysis is applied initially for data classification and subsequently to verify the reliability and objectivity of the qualitative findings.

3.2. Data Collection and Description

The data of the study includes three extracts taken from daily conversations of GPT's users, whether the users are males or females. All of the chosen extracts are selected according to some categories. First, the topic of the selected extracts is put under the heading of "information seeking". Second, the subject matter of the information is daily life and practical advice. Third, the age of human speaker rates between 25-41 years old.

3.3. The Model of the Study

The current study designs an eclectic model mainly depending on Bucholtz & Hall (2005), Bourdieu (1991), and Brown and Levinson's (1987) theories. In other words, the model is divided into three steps, namely: contextual description, linguistic description, and social interpretation (See Figure 1).

i. Step 1: Contextual Description

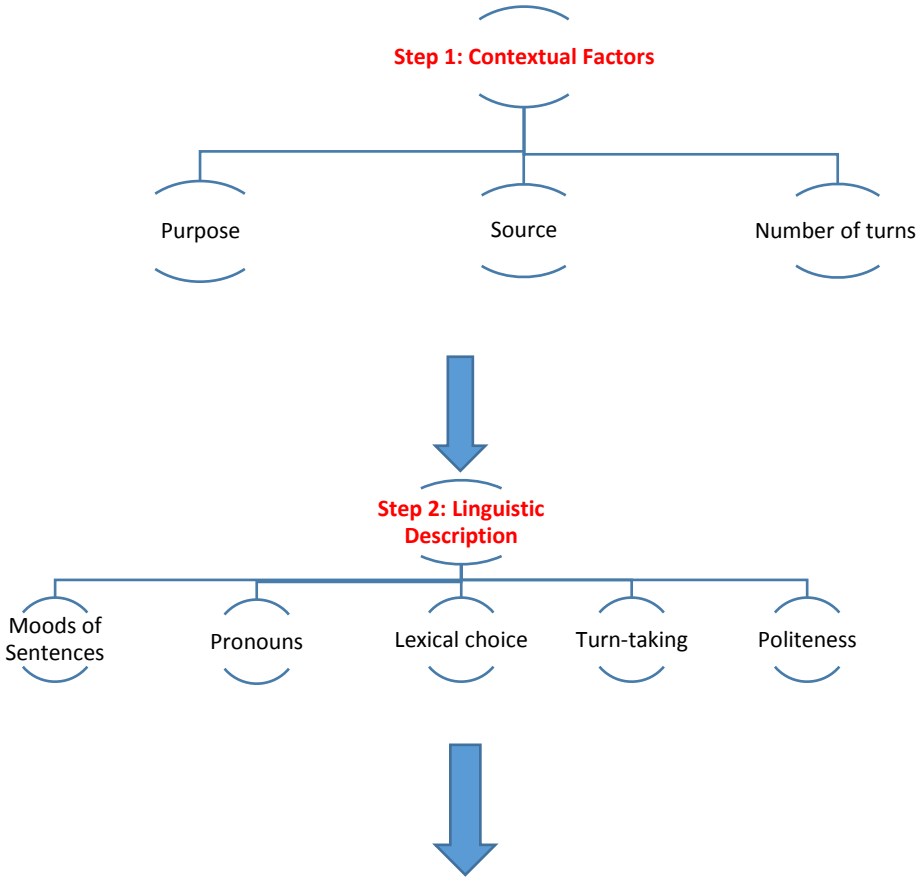
In this step, some contextual categories are examined, like source, purpose, and number of turns. With source, the study shows information about who are the participants, e.g., H-ChatGPT interaction – H refers to Human . For purpose, it examines the main purpose of the interaction, e.g., informational, advisory, emotional, etc. In relation to the number of turns, the study examines the number of exchanges are there in each extract.

ii. Step 2: Linguistic Description

According to the second step, linguistic features relevant to identity, power, and politeness are identified. In details, it investigates some linguistic markers for politeness, e.g., using expressions, like "would you like" or "please" when having a talk with ChatGPT. Using personal pronouns is also shed light on to show how persona is constructing. Further, moods of sentences are referred to in this step. Exploring moods of sentences help in understanding power within human-AI exchange. Also, lexical choice is exploited to show how both human users and ChatGPT choose their words. The last linguistic marker is turn-taking. In other words, counting the turn-takings for both human users and ChatGPT is significant in showing which partner controls the context.

iii. Step 3: Social Interpretation

In this step, some social variables are used to interpret how power and identity are guided in Human-AI Talk. These variables include age, sex, power and identity. Within age, the study focuses on human age since AI has no known age. In other words, if the human users are on the range between18-25 years old, they will be classified as young adults. If they are at the range between 26-40, they will be classified as adult. If they are at the range between + 41, they will be classified as old users. In relation to sex, also the focus will be on the human sex. Put differently, the study shows how males and females interact with AI. With regard to identity, the study follows Bucholtz & Hall's (2005) classification for identity. That is, the Human-AI talk is examined according to five principles which are Emergence Principle, Positionality Principle, Indexicality Principle, Relationality Principle, and Partialness Principle (See p. 2). These principles are followed to interpret how identity is being performed linguistically in Human–GPT talk. The last social factor is power. The study examines power according to Bourdieu's (1991) key concepts. In other words, the selected extract is analyzed according to five concepts: Linguistic Capital, Symbolic Power, Habitus, Legitimate Language, and Market and Field.



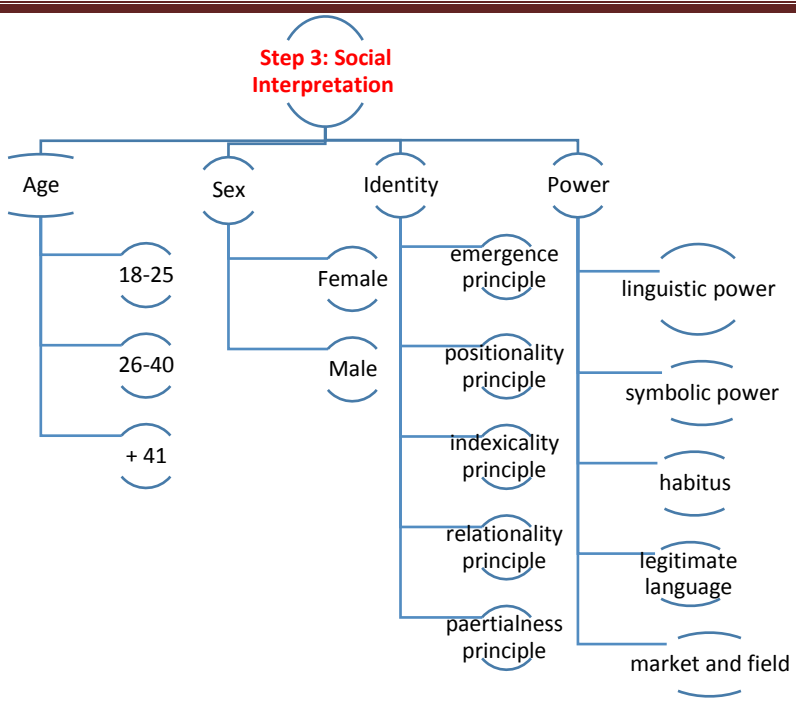
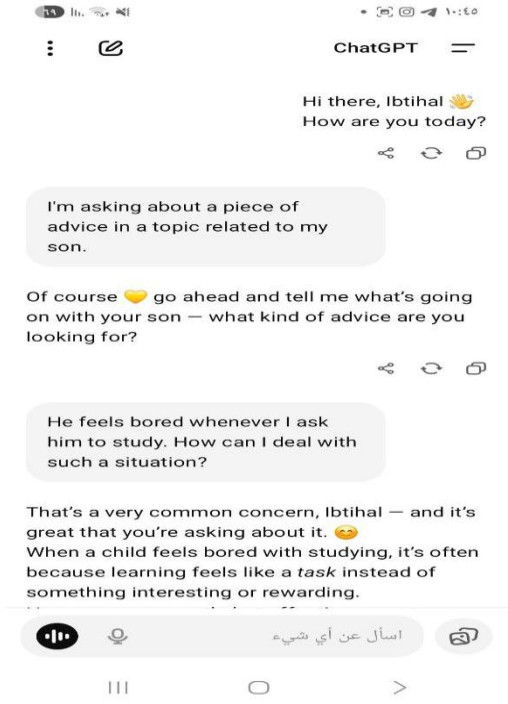


Figure (1): The Model of the Study

4. The Analysis

Extract 1:



i. Step 1: Contextual Description

Starting with source, it is H-ChatGPT interaction. The human is a female adult user (Ibtihal), interacting with the AI for personal advice. With purpose, the user seeks advice about her son's behavior (boredom while studying). Having number of turns, it is found that there are four human turns and three ChatGPT turns, i.e., balanced interaction.

ii. Step 2: Linguistic Description

In moods of sentences, the human uses interrogatives, e.g., "How can I deal with such a situation?" showing information-seeking behavior. ChatGPT uses declaratives (explanations, reassurance) and imperatives softened with politeness, e.g., "go ahead and tell me." Within pronouns, ChatGPT uses the second-person "you" and first-person "I" pronouns to personalize the talk — constructing a supportive and empathetic identity. The human uses first-person "I" to express concern and involvement. Lexically, the human uses everyday vocabulary "feels bored," "study". ChatGPT uses emotionally supportive and pedagogical terms "great that you're asking about it," "task instead of something interesting", reflecting empathy and expertise. As for turn-taking, the exchange is cooperative. That is, the human initiates, ChatGPT elaborates. The AI maintains engagement by inviting continuation "go ahead and tell me…", showing shared conversational control. Lastly, there is a high level of positive politeness used by AI. In other words, ChatGPT uses emojis and compliments "it's great that you're asking about it", i.e., off-record strategy to soften its authority and creating solidarity; unlike the H who starts her turn with a request.

iii. Step 3: Social Interpretation

Starting with age, the H is 33 years old, so H is ranked as adult. As for sex, H is a female. She acts as a mother seeking guidance. Put differently, her language shows emotional sensitivity, care, and a collaborative. With regard to identity, the five principles are examined. That is, emergence identity is clear when a concerned mother emerges through her questions. For positionality, H positions herself as dependent on ChatGPT's expertise. In indexicality, words like "my son" index her maternal role. With relationality, ChatGPT constructs a caring, counselor-like identity. As for partialness, H's identity is only partially represented (as mother, not academic or professional). The last social variable is power. It is represented as follow: linguistic capital is obvious since ChatGPT has fluent, supportive English which gives it symbolic authority; symbolic power appears in its role as advisor gives it epistemic power (the power of knowledge); habitus gives a hint how H has a high academic level in the sense that she uses formal English. This makes ChatGPT follows the tone to have a formal polite language; the last existed principle of power is market and field. The field is digital communication, where ChatGPT's linguistic competence grants it symbolic dominance.

Extract 2

i. Step 1: Contextual Description

The source is H-ChatGPT interaction. The H is a male adult called Ammar. The AI is ChatGPT. The purpose of the interaction is for informational and opinion view. That is, the human seeks factual information about elections, then shares a personal stance on political participation. With number of turns, four human turns and three ChatGPT turns —balanced but sequentially controlled by the human's questioning.

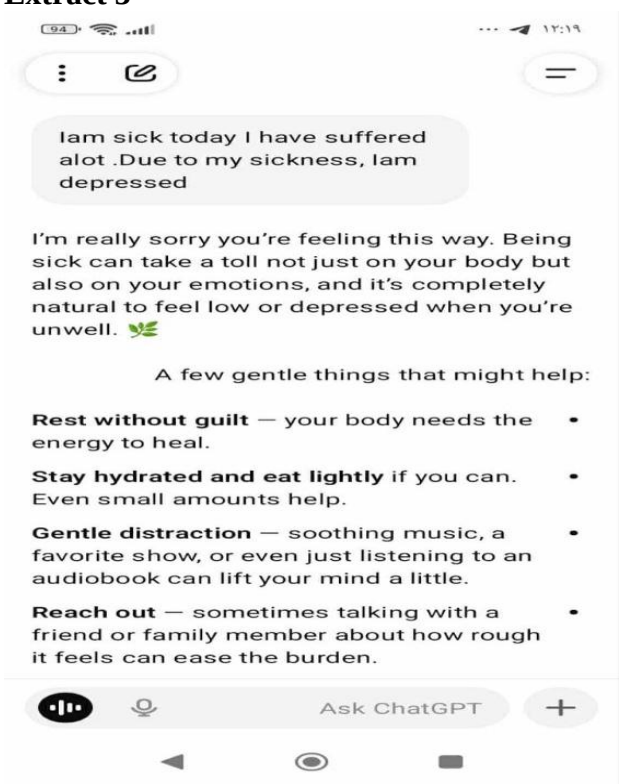
ii. Step 2: Linguistic Description

Having sentence moods, it is found that H uses interrogatives "When does Iraqi elections take place?", "Is it important to participate?") to indicate information-seeking behavior. On the other hand, ChatGPT uses declaratives to provide factual answers, e.g.,"The next Iraqi parliamentary election is scheduled..." and reassuring statements, e.g., "That's understandable…", showing an informative and empathetic stance. Regarding pronouns, ChatGPT uses second-person pronoun "you" as in "voting lets you influence...", which personalizes its advice and constructs an inclusive identity. On contrary, H uses first-person pronoun "I" as in "I fell the opposite", to mark personal opinion and self-positioning. Lexically, H's lexis is simple and direct, i.e., "important," "opposite" showing sincerity but limited elaboration. Whereas, ChatGPT's vocabulary is formal and neutral, like "scheduled," "governs," "influence," "trust the system", to indicate authority and objectivity. Within turn-taking, H initiates all turns; ChatGPT responds. In other words, The AI's responses are concise and cooperative, displaying no interruption and balanced conversational rhythm. Accordingly, power is shared but initiated by the human. In relation to politeness, H shows direct request through asking about Iraqi elections. As a response, ChatGPT employs positive politeness through empathy "That's understandable" and face-saving acts acknowledging the user's feelings.

iii. Step 3: Social Interpretation

Having age, it is found out that H is 36 years old. So, he is ranked as adult user. He is a male showing directness and limited emotional elaboration — a more rational than affective communication pattern. In relation to identity, H's identity emerges as critical citizen. Further, H positions himself as a skeptical participant; while ChatGPT positions itself as a neutral advisor. Words like "important" and "opposite" index the human's personal judgment and independence, i.e., indexicality. With relationality, ChatGPT builds a respectful, understanding relationship, aligning with the human's emotional tone without contradiction. For partialness, H's identity is only partially revealed — as a citizen with civic doubt, not as a professional or social actor. Regarding the last social variable, it is shown that some of power principles exist. In other words, ChatGPT has institutional linguistic authority, using grammatically refined English and structured phrasing, unlike H whose language is somehow weak. Symbolic power is held by AI, i.e., epistemic power since it is the knowledge provider, but softens it through empathy. Also, H's brief sentences shows that he is non-institutional habitus and follows ordinary conversational style. Finally, the extract shows that the field is digital civic communication, where ChatGPT acts as a trusted information source.

Extract 3



i. Step 1: Contextual Description

To start, the source of this extract is H-ChatGPT interaction. The H is an adult female user expressing emotional distress and physical pain, while ChatGPT assumes a supportive counselor role. The purpose is emotional expression and empathetic support. The H expresses suffering and seeks understanding; ChatGPT provides emotional validation and gentle advice. In number of turns, The extract consists of one human turn and one extended ChatGPT turn. Power distribution shows ChatGPT taking longer textual space, which reflects empathic dominance rather than authoritative control.

ii. Step 2: Linguistic Description

The H uses declarative sentences, like "I am sick today", "I have suffered a lot" to report feelings, not to ask. These declaratives are emotionally loaded, showing helplessness. On the other hand, ChatGPT replies with declaratives softened by empathy, offering explanation and comfort. Later, imperatives "Rest without guilt", "Stay hydrated", "Reach out" are used as gentle suggestions, not commands, i.e., supported by politeness markers like "might help" and the modifier "gentle. As for pronouns, H frequently uses first-person pronoun "I" to indicate self-focus and personal suffering; while ChatGPT uses second-person "you", as in "you're feeling this way", "your body", "you can", to create personal connection and solidarity. Lexically, H's vocabulary is simple reflecting emotional and suffering state, like "sick," "suffer," and "depressed." On the other side, ChatGPT uses emotive adjectives, like "really sorry", "completely natural" which conveys validation and reassurance. As for politeness strategies, ChatGPT employs off-record strategies through empathy, as in "I'm really sorry", "might help", and inclusive advice "sometimes talking with a friend…". It avoids direct authority, aligning instead with a counselor or friend identity. That makes it appear more polite. Within turn-taking, there is unequal length in turns but cooperative in tone. ChatGPT's extended reply compensates for the human's emotional vulnerability by providing comprehensive emotional support.

iii. Social Interpretation

To start with, H's age is young adult (i.e., 22 years old). The selection of expression and emotional articulation reflects this age group. Regarding sex, , H'S expressive tone aligns with the female communicative style, characterized by openness and emotional sharing. In relation to identity, H's identity emerges as a vulnerable self, defined through illness and emotional fatigue. Further, H positions herself as dependent and emotionally fragile; ChatGPT as a supportive caregiver, i.e., positionality. With Indexicality, words like "suffered" and "depressed" index pain and emotional exhaustion. Then, relationality is clear in how ChatGPT constructs a caring and empathetic relationship, balancing authority and compassion. Finally, H's identity is partially represented — as a sick person, not as a social or professional actor.

4.1 Results and Discussion

This sections provides an insightful understanding of how language functions as a sociolinguistic medium through which identity, power, and politeness are established between H and ChatGPT. The findings confirm the study's hypotheses that AI not only mirrors human linguistic behavior but also participates actively in shaping social meanings and identities. ChatGPT demonstrates linguistic adaptability, politeness, and symbolic power that position it as a cooperative yet authoritative interlocutor. Human users, in turn, reveal diverse self-identities, i.e., maternal, civic, and emotional, depending on context, purpose, and sociolinguistic variables such as age and gender. The following tables make it clear.

No. of Extract	Moods of sentences	Pronouns	Lexical choice	Politeness strategies	Turn-taking
1	H: interrogatives AI: declaratives & imperatives	H: I AI: you & I	H: every day vocabulary AI: supportive & pedagogical vocabulary	H: direct request AI: positive politeness (off-record strategy)	H: 2 turns AI: 3 turns (cooperative and balanced)
2	H: interrogative AI: declaratives	H: I AI: you	H: sincerity & limited elaboration AI: formal & neutral	H: direct request (less polite) AI: empathy & acknowledgement (off-record strategy)	H: 3 AI: 3 Balanced & initiated
3	H: declarative AI: declaratives & imperatives	H: I AI: you	H: emotions & suffering AI: emotional & reassuring	H: positive politeness (shared feelings) AI: positive politeness (empathy & mitigation, i.e. off-record)	H: 1 AI: 1 Though both have the same number of turns, yet they are unequal in length

TABLE 1: SUMMARY OF LINGUISTIC FINDINGS ACROSS EXTRACTS

Table (2): Occurrences of Linguistic Features

No.	Linguistic Feature	F.	%	Interpretation
1	Interrogative (H)	2	66.7	Information seeker
2	Declarative (H)	1	33.3	Expressing feelings
3	Declarative (AI)	3	100	Information-giving
4	Imperative (AI)	2	66.7	Imperatives are used to give advice

5	First-person "I" H	3	100	Self-expression and identity assertion
6	Second-person "you" (AI)	3	100	Reflecting empathy
7	Emotional/supportive vocabulary (AI)	2	66.7	Empathetic function
8	Neutral/informational vocabulary (AI)	1	33.3	Objective function

According to Table (1) and Table (2), the linguistic analysis shows that identity in H–AI interaction is performed through pronoun usage, sentence moods, and lexical choice. Across all extracts, humans rely heavily on the first-person pronoun "I" to express personal experience and emotion, while ChatGPT employs both "you" and "I" to establish personalization and shared engagement. This mutual pronoun use aligns with Bucholtz and Hall's (2005) notion that identity is emergent and relational, as both interlocutors construct social roles within the discourse. In more details, in Extract 1, the female user's use of interrogatives portrays a maternal and dependent identity, while ChatGPT's use of empathetic and supportive language creates a counselor persona. Extract 2 reflects a rational and civic identity, where the male speaker uses direct questions to assert autonomy, and ChatGPT maintains a neutral and informative stance. Extract 3 demonstrates emotional vulnerability, where the young female user projects a fragile self, and ChatGPT assumes the identity of an empathetic caregiver. These findings reveal that ChatGPT's linguistic strategies allow it to mirror the emotional and social positioning of the human interlocutor, thereby enhancing the illusion of mutual understanding.

As for politeness strategies, ChatGPT consistently employs positive and off-record politeness strategies using empathy, compliments, and inclusive expressions, like "let's," "you can" to preserve the user's face. The AI's use of hedges and emotional validation, as in "I'm really sorry," "That's understandable" to enable relational work that constructs solidarity and trust. These strategies reveal that ChatGPT's linguistic design incorporates interpersonal sensitivity, positioning it not as an impersonal machine but as a socially competent communicator capable of performing human-like relational roles.

Table (3): Power Principles in H-AI Interaction

No. of Extract	**H's role**	**ChatGPT's role**	**Power indicators**	**Dominance types**
1.	A caring mother	Advisor	Linguistic capital & empathy	Symbolic
2.	Critical citizen	Neutral advisor	Knowledge authority & structured English	Institutional
3.	Helpless patient	Supportive caregiver	Emotional reassurance	Emphatic

Table (4): Occurrences of Power Distribution

No.	Power Type	F.	%
1.	Symbolic power	1	33.3
2.	Institutional power	1	33.3
3.	Emphatic power	1	33.3

As shown in table (3) and (4), power in machine talk is not unidirectional but rather negotiated and context-dependent. ChatGPT demonstrates symbolic, institutional and emphatic power derived from its linguistic competence and informational authority. However, it mitigates this power through politeness and emotional alignment, allowing balanced turn-taking and reduced asymmetry.

Table (5): Age and Sex Influence

No. of Extract	Age	Marker	Sex	Marker
1.	33	Seeking advice by a responsible mother	Female	Emotional vocabulary
2.	36	Having a critical inquiry	Male	Vocabulary reflects seriousness
3.	22	Emotional support	Female	Emotional vocabulary

Table (6): Occurrences of Social Variables

No.	Category	F.	%
1.	Female users	2	66.7
2.	Male users	1	33.3
3.	Adult	2	66.7
4.	Young-adult	1	33.3

Having tables (5) and (6), age and sex are important factors in determining sociolinguistic identities and forming communication styles. The female users (Extracts 1 and 3) exhibit emotive and cooperative communication, as evidenced by emotional vocabulary and politeness cues. In contrast, the male user (Extract 2) exhibits the boldness and reason typical of masculine communication habits by using direct inquiry and succinct statements. Age also affects the tone of interactions. While the younger speaker in Extract 3 displays linguistic spontaneity and emotional transparency, adult speakers (Extracts 1 and 2) have more structured and reflective turns. This bolsters the claim made by Eckert (1997) that, even in digitally mediated environments, age-indexed language behavior reflects social identity.

5. Conclusions

The following conclusions have been reached and are basically associated with the hypotheses of the study:

1. The analysis confirms that ChatGPT constructs a flexible, context-dependent identity through linguistic choices such as pronoun use, lexical selection, and politeness strategies. The AI assumes multiple personae — a counselor, advisor, or educator — depending on the communicative purpose. Human users, in turn, reveal fragments of their identities (as parents, citizens, or emotional individuals) according to the context of interaction. This partially confirms the first hypothesis.
2. Power is not unidirectional but negotiated. While humans maintain interactional control through topic initiation, the AI often possesses epistemic and symbolic power derived from its linguistic competence and access to information. In emotional or advisory contexts, ChatGPT's authority shifts from dominance to empathy, exercising soft power through reassurance and support.
3. ChatGPT consistently applies positive and off-record politeness strategies (e.g., empathy markers, inclusive pronouns, mitigated imperatives) to maintain solidarity and reduce face threats. Human users, however, display varied levels of politeness depending on gender and purpose.
4. Female users tend to use more emotional and mitigated language, whereas male users employ direct and task-oriented expressions.
5. Age significantly affects linguistic style and the expression of identity. Younger users often employ informal or emotionally charged expressions, while adult users rely on structured and purposeful discourse.

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Appendix

Biological Information of ChatGPT Users

No.	Sex	Age	Range
1	Female	33	Adult
2	Male	36	Adult
3	Female	22	Young Adult
4	Female	25	Adult
5	Male	19	Young Adult