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PERSONALITY TRAITS AND THE USE OF ASSERTIVE AND DIRECTIVE ILLOCUTIONARY ACTS DURING ENGLISH TASK-BASED INTERACTION

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Abstract

This study investigates how individual personality traits (PTs), measured by the Myers-Briggs Type Indicator (MBTI), influence the production of assertive and directive illocutionary acts (IAs) in American English using speech act theory. Personality traits shape language use, yet analyses often focus on lexical or semantic features, which decontextualize language from pragmatic meaning. To address this gap, 32 native English speakers were recorded solving a Tetris-like puzzle in pairs and then completed an MBTI assessment. Their speech was analyzed for assertive and directive IAs. Results show significant associations between traits and IA production: judging types frequently produced stating IAs; extraverts more often produced requests for information IAs; and extraversion, sensing, and feeling traits correlated with informing IAs. These findings offer new insight into how personality shapes pragmatic use in American English, contributing to a broader understanding of variation among native English speakers' communicative practices.

Key words

Speech acts; illocutionary acts; pragmatics; personality traits; MBTI

Introduction

Research has shown that personality traits (PT) explain a wide range of human behaviors, including embarrassment, empathy, creativity, and shyness. As language is itself a human behavior, it follows that PTs also influence linguistic production. In English linguistic approaches, this dimension of individual difference is relatively underexplored, especially when compared to variables like gender (e.g., Coates 2016; Fuchs 2017) and age (e.g., Axia and Baroni 1985; Barbieri 2008). Despite its smaller presence in the literature, existing research has identified meaningful links between PTs and various aspects of English speaker's language use, including prosodic features (e.g., Lee et al. 2021; Mairesse and Walker 2007), lexicosemantic choices (e.g., Argamon et al.

2005; Beukeboom et al. 2012), and speech act (SA) production (e.g., Appling et al. 2021).

However, several limitations characterize this body of work. First, studies on psychological traits tend to focus on select aspects of linguistic production, specifically lexical (the study of words) and semantic (the study of meaning of words and sentences; lexicosemantic) aspects of speech (Dehghani and Boyd 2022). Although an in-depth review of lexicosemantic studies is beyond the scope of this paper, it is clear the narrow focus can only provide a confined view of the larger relationship between English language use and speaker PTs. Further, the prevailing method is to analyze words through dictionary-based approaches (e.g., LIWC, Linguistics Inquiry and Word Count; Pennebaker et al. 2003; Pennebaker et al. 2015). However, this approach does not adequately account for how words are used in context. A simple example can be illustrated with the word *love*. A LIWC analysis would classify this word as expressing a positive emotion. However, if the speaker sarcastically produces the utterance, *I love final exams*, the word *love* assumes a negative sentiment, closer to *hate* or *dislike*. A strict lexicosemantic analysis of *love* (or the whole unit, *I love final exams*) will not account for how meaning is developed in the whole context of the utterance. Thus, understanding speaker meaning requires a linguistic pragmatic analysis (the study of meaning through context).

Traditional corpus and sentiment-analysis approaches have faced similar critiques, as they often emphasize word frequency over meaning in context. Some approaches within corpus linguistics, such as corpus-assisted discourse studies (CADS), attempt to address this limitation by starting with large datasets and then examining individual examples closely to recover context-specific meanings (Partington et al. 2013). However, even these methods typically differ from pragmatic analysis, because they infer meaning from patterns in the text rather than capturing how meaning unfolds in real time through speaker intention and interaction.

Another pattern in the existing literature is a reliance on textual data collection techniques. These studies focus on elicited written responses, such as mock emails (e.g., Gill and Oberlander 2002; Shimura 2003) and structured narrative writing assignments (e.g., Argamon et al. 2005; Baddeley and Singer 2008; Hirsh and Peterson 2009; Lee et al. 2007; Mairesse et al. 2007; Pennebaker and King 1999). Other scholars have sought more naturalistic written data by utilizing social media posts (e.g., Appling et al. 2021; Choong and Varathan 2021; Kulkarni et al. 2018; Li et al. 2018; Wang 2015) and blogs (e.g., Gill et al. 2009; Yarkoni 2010). Relatively few studies analyze spoken language. Among these studies, a further distinction can be made between those using naturally occurring speech (e.g., Mehl et al. 2006; Mehl and Pennebaker 2003; Thorne 1987) and those using stimulated speech through structured interviews and assessments (e.g., Beukeboom et al. 2012; Fast and Funder 2008). Research suggests that naturally occurring speech is more effective for observing SA production (e.g., Félix-Brasdefer 2007), but this approach remains rare.

It is widely recognized that speech and writing are distinct modalities, each employing different linguistic devices (Biber 2022). Consequently, findings derived from written contexts (e.g., student essays) may not generalize to spoken contexts (e.g., dyadic conversation). To better understand how PTs impact linguistic produc-

tion, it is necessary to examine both written and spoken language across diverse contexts. Currently, a significant gap remains in research focusing on spoken data.

This exploratory study seeks to address some of the aforementioned issues. First, it focuses on the collection and analysis of spoken data through an observational approach in an experimental setting, which differentiates the context from many prior studies. Second, it emphasizes pragmatics, using SA theory and the analysis of illocutionary acts (IAs) to explore how PTs manifest in real-time speech. The limited research connecting SA and IA production and PTs will be discussed in the literature review, following an overview of SA and PT theory.

Speech Act and Illocutionary Act Theory

This study investigates how PTs influence the use of IAs through the lens of classical SA theory (Austin 1962; Searle 1969). SA theory proposes that an utterance not only conveys information, but it also accomplishes an action. Searle's (1969; 1975) taxonomy outlines five categories of SAs: assertives, directives, expressives, commissives, and declaratives. This study focuses specifically on assertives and directives. Assertives reflect a speaker's belief about the truth of a proposition (i.e., a speaker believes something to be the case; e.g., *the sky is blue*), while directives are used to prompt the hearer to take some form of action (e.g., making a request or demand; e.g., *look at the blue sky*).

A core principle of pragmatics, and a crucial component of SA theory, is that meaning is context dependent. A SA cannot always be accurately categorized in isolation from its context (Appling et al. 2021; Mairesse et al. 2007). Unlike semantic and syntactic analyses, pragmatics focuses on speaker meaning, contextual meaning, and their effects (Crystal 1997; Thomas 1995; Yule 1996). For example, one aspect of SA production is the perlocution, which refers to both the speaker's goal and the perlocutionary effect, which is the actual outcome of the SA and how the hearer responds. The perlocutionary effect is often determined by hearer uptake (e.g., whether a directive leads the hearer to provide the requested information or take the requested action). Therefore, in SA analysis, it is important to consider the interlocutor's response to the SA in order to identify which SA the speaker was performing. In addition to context, an utterance's semantic, phonological (e.g., intonation), and syntactic features must also be evaluated to determine the SA type. For instance, the semantic and syntactic structure of *you think this fits here* gives the utterance the appearance of an assertive. However, if produced with the intonation of a question (rising intonation; e.g., *you think this fits here?*), it can function as a directive.

A SA category is instantiated in various IAs, which further distinguish "in which way and which sense [the speaker is] on this occasion 'using' [the SA]" (Austin 1962: 99). In other words, while two utterances may belong to the same SA category, they may realize different illocutionary forces depending on the speaker's intention and how the act is carried out. This distinction can be illustrated with an assertive utterance such as *the kids are here*, which may function as a warning (e.g., to prompt caution) or as the information (e.g., to signal that dinner. In

either case, the propositional content remains constant, while the illocutionary force varies as a function of speaker intention and contextual interpretation.

Differences in illocutionary force are realized through a range of linguistic means, commonly referred to as illocutionary force indicating devices (IFIDs; Searle 1969). These include explicit performative expressions (e.g., *I warn you that...*), as well as more implicit grammatical and lexical markers that conventionally guide how an utterance is to be interpreted. Searle and Vanderveken (1985), for example, describe distinctions such as *request* versus *insist* as differing in degree of illocutionary strength. In assertive speech acts, such variation is frequently expressed through epistemic modality, which indexes the speaker's degree of commitment to the truth of a proposition. Thus, *I am right* conveys a relatively strong epistemic commitment, whereas *I may be right* or *I might be right* signals a weaker commitment.

Comparable variation can be observed in directives, where illocutionary force is often modulated through IFIDs associated with direct and indirect speech acts (Searle 1975). An imperative such as *put this here* functions as a direct order, while *can you put this here?* realizes a directive indirectly through interrogative form. Although both utterances aim to prompt the hearer to act, their grammatical form shapes how directive force is conveyed and how much contextual inference is required. As such, IFIDs play an important role in signaling speaker intention, a consideration that is central to the present study's analysis of assertive and directive speech acts in spoken interaction.

There are numerous different IA types that fall under the broader categories of assertive and directive SAs. A list of 110 assertive IA types and 51 directive IA types was consolidated from relevant literature for this study (Alston 2015; Austin 1962; Vanderveken 1990). Many of these types were not present in the data. Those that were identified were re-categorized into smaller functional groups based on their pragmatic functions within the discourse context. Related research on PTs and English IAs often examines either a single IA (e.g., requesting) or a small subset of related types. This present study explores a class of five assertive IAs and two directive IAs (discussed further in Procedure and Materials).

Personality Traits

There are multiple theoretical approaches to understanding personality, but most research in linguistics opts to study personality constructs by way of trait theory. Trait theory proposes that people differ from one another in the degree to which they express dimensions of thought, feeling, and behavior. These dimensions can be categorized as traits (e.g., extravert/introvert) and measured using standardized assessments, most commonly through self-report instruments.

Two of the most widely used frameworks in linguistics studies for assessing PTs are the Myers Briggs Type Indicator (MBTI; Myers 1962) and the Big Five NEO-PI (Goldberg 1990; Costa and McCrae 1992). In this study, I employed the MBTI to assess participants' PTs. Briggs and Myers (1962) developed the MBTI from Jung's (1921/1971) theories on cognition and psychological types. The MBTI

measures four binary PT categories: 1.) extraversion-introversion, 2.) sensing-intuition, 3.) feeling-thinking, and 4.) judging-perceiving. These four trait categories account for the ways in which people differ in reacting, observing, processing, and structuring the world around them (see Table 1 for trait descriptions). Together, these categories produce one of 16 personality types (e.g., ENFP, ISTJ, ESTP). However, in research settings, these traits are often analyzed individually rather than as complete types (John et al. 2008; Lee et al. 2007; Shimura 2003; Thorne 1987). In other words, the MBTI is regularly utilized as a PT assessment rather than a personality type assessment.

Table 1. MBTI Trait Descriptions (Adapted from The Myers & Briggs Foundation, <https://www.myersbriggs.org/>)

MBTI Trait	Trait Description	Binary Trait	Binary Trait Description
Extraversion	Gets energy from being around people and engaging in action; enjoys external stimulation and discussing ideas aloud.	Introversion	Gets energy from spending time alone; prefers inner thoughts, reflection, and deeper one-on-one interactions.
Sensing	Focuses on present realities and tangible details; values practical experience and remembers concrete facts.	Intuition	Focuses on future possibilities and abstract ideas; prefers patterns, theories, and conceptual understanding.
Thinking	Makes decisions based on logic, consistency, and objective analysis; values fairness over sentiment.	Feeling	Makes decisions based on empathy, personal values, and concern for others; prioritizes harmony and relationships.
Judging	Prefers structure, planning, and decisiveness in the outer world; likes to have things settled and organized.	Perceiving	Prefers flexibility, spontaneity, and openness to new experiences; adapts easily and keeps options open.

As an alternative to the MBTI, some scholars utilize the Big Five taxonomy to assess PTs (e.g., Radisavljević et al. 2022). This taxonomy consists of five trait categories: openness to experience, conscientiousness, extraversion, agreeableness, and neuroticism. These two PT models are not entirely independent of each other. A number of studies have identified correlations between them, suggesting some overlap in how they capture individual differences in personality (e.g., Furnham 1996; Furnham et al. 2003; Jackson et al. 1996; Klinkosz and Iskra 2010; MacDonald et al. 1994; McCrae and Costa 1989; Renner et al. 2014).

Criticism directed at the MBTI concerns its lower reliability and validity when used to classify individuals into the 16 types (e.g., ENFP, ISTJ). However, this

should not be confused with the stronger reliability and validity scores regarding the four individual traits. Empirical studies generally support the reliability and validity of the MBTI four trait categories (Francis and Village 2022; Randall et al. 2017). Despite pushback on using the MBTI in academic research (e.g., Furnham 2022), its use remains strong, particularly in research on English language learning (e.g., Jiang 2024; Park 2024) and computational linguistics (e.g., Cerkez et al. 2021; Rathi et al. 2022). Recent research in natural language processing (NLP) and personality computing has shown that models trained to predict personality from English text using the MBTI can outperform those based on the Big Five (depending on the algorithm employed; Celli and Lepri 2018). This suggests that the MBTI, while debated, continues to offer practical value in English language and linguistic research.

Literature on Personality Traits and Speech Acts

One of the earliest studies exploring the relationship between PTs and IAs is Thorne (1987), who examined how extraversion versus introversion (measured by the MBTI) might influence English linguistic production and how it may be shaped by the personality of their interlocutor. In a controlled experimental setting consisting of only female participants, Thorne recorded various pairs of extraverts and introverts engaging in 10-minute conversations, during which participants had full control over the topics and discussion. Thorne developed a framework of eight IA types (compliments, agreements, reaches for similarity, stories, pleasure talk, hedges, problem talk, and disagreement/criticism) based on patterns identified during stimulated recall sessions. While the total number of IAs did not significantly differ between extraverts and introverts, notable patterns emerged depending on the interlocutor pairings. Extravert-extravert interactions featured more compliments, agreements, similarity-seeking moves, and pleasure talk, whereas introvert-introvert interactions showed a greater use of hedges and problem talk. These findings suggest that the PTs of one's conversational partner can influence the speaker's IA choices.

Mairesse et al. (2007) took a computational approach to this question, attempting to predict Big Five PTs based on English linguistic behavior, including SAs. Participants' personality profiles were gathered through both self-report and observer-report questionnaires. Using the Electronically Activated Recorder (EAR), the researchers recorded naturalistic 30-second conversation snippets. Only the participants' speech was transcribed for analysis, and it was annotated for a range of linguistic features, including four IA types as classified by Walker and Whittaker (1990): assertion, command, prompt, and question. The models were somewhat effective in predicting PTs based on linguistic features, although IAs proved more resistant to prediction. The data collection method (EAR devices) presented challenges for IA categorization because the IAs could not be analyzed in their context of use since the researchers did not have access to the hearer's response (the perlocutionary effect). Nonetheless, a small set of correlations emerged: assertion IAs were negatively correlated with emotional

stability but positively correlated with conscientiousness; command IAs showed the opposite pattern. Prompt IAs correlated positively with agreeableness, conscientiousness, and openness, while question IAs were positively associated with emotional stability and negatively with conscientiousness.

Further research by Appling et al. (2021) analyzed 250 English Facebook status updates using Searle's (1969; 1975) traditional SA categories. Using the Big Five as their PT assessment, they found that neuroticism showed a negative correlation with commissive SAs. Additionally, extraversion positively correlated with assertive SAs, while agreeableness and conscientiousness were negatively correlated with this SA type.

Interest in this area of research has also emerged from studies in second language acquisition (SLA) and interlanguage pragmatics. Shimura (2003) used the MBTI to assess how Japanese-speaking extraverts and introverts produce advice-giving IAs in English via letter-writing tasks across three intervals. Results indicated that extraverted English language learners (ELLs) demonstrated improved pragmatic competence over time, whereas introverts provided consistently direct advice, regardless of situational formality. Similarly, Taguchi (2014) used the MBTI to investigate how PTs influenced Japanese-speaking ELLs in their production of English requests and opinions through oral discourse completion tasks. The study revealed differences between thinking and feeling types in the construction of direct versus indirect SAs, suggesting that personality dimensions shape not only what is said but how it is said. In another SLA-focused study, Kuriscak (2006) used the Big Five to explore the effects of extraversion and neuroticism on the production of requesting and complaining IAs in Spanish. Among 292 native English-speaking learners of Spanish, personality did not predict which IA type was chosen. However, extraverts employed significantly more mitigation strategies in both requests and complaints, underscoring a nuanced influence of personality on pragmatic style rather than act type.

A recurring theme across this body of research, taking into account both SA and lexicosemantic studies, is a focus on extraversion, due in part to its relatively observable and predictable linguistic correlates (e.g., Kuriscak 2010; Wang 2015). In contrast, other MBTI trait categories, such as judging vs. perceiving, have proven more elusive in linguistic analysis (e.g., Choong and Varathan 2021; Li et al. 2018). The current study investigates the influence of all four MBTI PTs on IA production, a pragmatic feature of language that remains underexplored. Furthermore, rather than isolating or seeking to elicit the production of specific IAs (e.g., Shimura 2003), this study sought to capture near-natural language use, thereby offering a more realistic perspective on how personality informs pragmatic behavior. The experimental design, including participant recruitment, procedures, materials, and data handling methods, is described in the following section.

Materials & Methods

The data collected for this study were originally intended to examine the relationship between PTs and the larger scope of linguistic production, including

lexicosemantic and SAs. Following this research, this dataset has also been utilized in other lines of inquiry, such as the analysis of participant frame-breaking in experimental settings (Miller et al 2022) and the sociopragmatics features of embarrassment (Miller et al 2025).

Participants

Participants ($n = 32$) over the age of 18 were recruited from a medium-sized university in the southern United States and the surrounding communities. Their ages ranged from 18 to 64 years old, with the majority (69%) being between 18 and 34 years old. On average, female participants were older than male participants. Most participants ($n = 31$) were United States citizens or permanent residents, and one reported dual citizenship. Regarding race, 75% ($n = 24$) identified as white. The sample does not fully reflect the typical WEIRD (Western, Educated, Industrialized, Rich, and Democratic) population often found in behavioral and psychological research (Henrich et al. 2010). Only 38% of the participants were students in undergraduate or graduate programs, and the study took place in rural communities located 35-45 minutes from the nearest metropolitan area.

Two variables were intentionally controlled: first language and gender. Previous research has commonly controlled first language (e.g., Hirsh and Peterson 2009; Lee et al. 2007) and in at least one instance, for gender (Thorne 1987). In the present study, all participants were native speakers of English; nine also reported speaking a second language (i.e., Spanish, Vietnamese, Romanian, Russian, American Sign Language). Gender was controlled based on prior findings that men and women exhibit different linguistic patterns (e.g., Coates 2016; Fuchs 2017), which suggested that gender may have an impact in this study. Therefore, an equal number of male and female participants ($n = 16$) were included, and through random pairing, they were divided into five female pairs, five male pairs, and six mixed-gender (co-ed) pairs. Though gender is not commonly controlled in similar studies, it has been assessed as a possible influencing variable after analysis (Hirsh and Peterson 2009).

Procedure and Materials

Study procedures were approved by an institutional review board (IRB). The study consisted of two sessions; the first lasted approximately 15-minutes and participants were randomly paired together, while the second lasted approximately one hour and was completed individually. At the onset of the first session, dyads were seated at a table in front of a disassembled Tetris-like puzzle and instructed not to speak to each other until the researcher left the room. A voice recorder was placed next to the puzzle and a camcorder was positioned on the far end of the table or on nearby furniture. Participants completed an IRB release and a demographic survey. After completing the forms, each dyad was instructed to collaborate on completing the puzzle and to remain seated until the researcher

returned, which would conclude the first session (see Figure 1). The IRB protocol included a small deception component: participants were not initially informed that the study concerned their personalities. This information was disclosed at the conclusion of the second session, at which point they voluntarily signed an IRB deception release form.



Figure 1. Example of Session I Space with Participants Engaged in Task

To eliminate rating biases, the transcription and annotation process occurred between the first and second sessions, before participants' personality assessments would be collected and reviewed. The video and audio files were transcribed and annotated for SAs and IAs, which were identified manually using the SA framework (see Figure 2). An example of this analysis is provided in Figure 3.

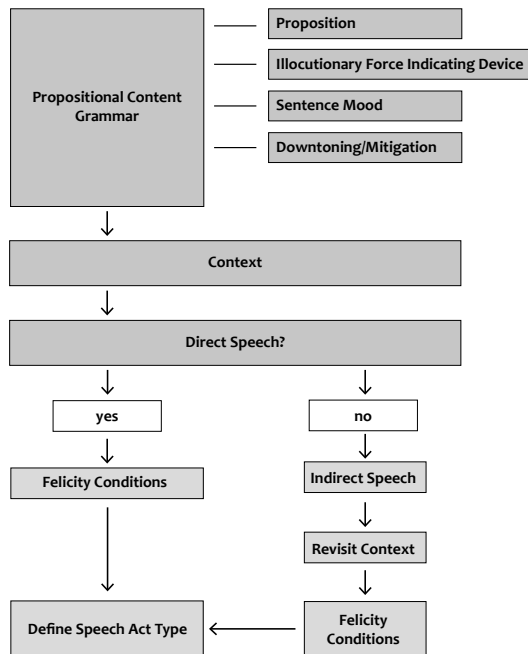


Figure 2. Framework for Analyzing Speech Acts

Utterance: “Green maybe there?”
Propositional Content/Grammar:
Propositional content: “green ... there”
IFID: Not present
Sentence Mood: Interrogative mood.
Downtoners/Mitigation: “Maybe”
Context
The speaker is watching the hearer assemble the puzzle.
The speaker uses his/her hand to motion to an empty space.
The hearer is holding the green piece.
The hearer responds by placing the green piece in the space.
The speaker responds by saying “okay.”
Direct Speech? No. This is indirect speech.
Revisit Context:
The speaker was not seeking a verbal response. The speaker was not requesting information despite the interrogative form of the utterance. The speaker was seeking to get the hearer to perform an action.
The hearer uptake also supports the notion that utterance was understood as a request for an action, thus supporting its categorization as a direct-request SA.
Felicity Conditions: Directive-request SA felicity conditions:
H is able to do [X]. S believes H is able to do [X].
It is not obvious to both S and H that H will do [X] in the normal course of events of his own accord.
S wants H to do [X].
Counts as an attempt to get H to do [X].
Directive SA: The speaker attempting to get the hearer to perform an action (Searle 1975).

Figure 3. Sample Analysis Using the SA Framework

Utterances were initially classified into one of the five SA types (e.g., assertives, directives) and then further categorized by IA type. Within the assertive SA category, five IA types were identified: stating, speculating, assessing truth, elaborating, and informing.

- Stating IAs are utterances expressed with a certainty regarding the truth of the propositional content (e.g., *assert, state, tell*).
- Speculating IAs reflected wavering degrees of speaker uncertainty, but implied a belief in the probability of the propositional content being true (e.g., *hypothesize, suggest, predict*).
- Assessing truth IAs involved evaluating the truth value of another’s assertion (e.g., *agree/disagree, confirm/negate*).
- Elaborating IAs expanded on previous statements by offering additional detail or context regarding the propositional content (e.g., *describe, emphasize,*

explain, clarify). For instance, to say, *I play guitar* (a stating IA) followed *But I've only played for six months* (an elaborating IA).

- Informing IAs aimed to bring new information to the hearer's attention (e.g., *answer, inform, remind*).

For directive SAs, two IA types were identified: requests for information and requests for action.

- Requests for information IAs had the perlocutionary goal to elicit verbal responses from the hearer (e.g., *ask, question*). For example, *What is your name?*
- Requests for action IAs had the perlocutionary goal of prompting physical actions by the hearer (e.g., *order, request*). For example, *Hand me that piece.*

Some utterances could not be transcribed and annotated for reasons such as speaker mumbling or overlap. These were revisited during the second session with each participant. Once initial data handling and analysis were complete, participants were invited to return for the second session, scheduled at their earliest convenience.

In the second session, participants completed an individual stimulated recall interview, the IRB deception release, and the MBTI assessment. The stimulated recall was used to gather additional information about specific utterances that were difficult to assess for SA and IA types during the initial annotation process. Afterward, participants were debriefed regarding the deception used in the first session (i.e., the study's true focus on PTs), and all participants signed the IRB deception release form. Participants then accessed an onsite computer to complete the MBTI. Results were stored either by emailing them to the researcher or by saving them directly to a pre-assigned digital folder created for each participant. Personality assessment results were not viewed until after all transcriptions and annotations were completed.

Transcriptions were then revisited and revised based on the additional information gathered during the second session. Finalized annotations were independently reviewed by a second rater to assess interrater reliability using a coding manual developed by the researcher. A Cohen's kappa score of .74 indicated good agreement between raters.

Results

A total of 1,953 SAs were identified. This study focused on assertive and directive SAs, which made up 79% ($n = 1,548$) of the overall SA data. Assertive SAs accounted for 64% of the data ($n = 1,250$) and directives for 15% ($n = 298$). A point biserial correlation (r_{pb}) statistical treatment was used to test links between each IA category and the binary PT categories; α was set at .05. All analyses were conducted in RStudio (Posit Team 2024). A chi-square test of independence indicated that participants' gender was not significantly associated with any PT or IA category. Descriptive data and the comprehensive statistical results of all five IAs and two directive IAs are provided below.

Personality Trait Distribution

Table 2 summarizes the distribution of MBTI PTs among the 32 speakers. Introverts and extraverts were nearly balanced (17 vs. 15), as were sensors and intuitives (14 vs. 18). A larger skew appeared for the thinking-feeling traits, with feelers out-numbering thinkers 3:1 (24 vs. 8). Judgers ($n = 19$) slightly out-numbered perceivers ($n = 13$).

Table 2. Personality Trait Distribution

Personality Trait	No. of Participants with this Trait	Dichotomous Trait	No. of Participants with this Trait
MBTI			
Extraversion	15	Introversion	17
Sensing	14	Intuition	18
Thinking	8	Feeling	24
Judging	19	Perceiving	13

Assertive IAs

Across all participants, 1250 assertive IAs were identified. Table 3 illustrates the frequency profile of each assertive IA type across each PT. Elaborating was the modal subtype, accounting for roughly one-third of every trait group’s assertive production (31%–36%). Assessing-truth and stating followed at approximately one-fifth each. Speculating and information IAs were the least common, never exceeding 15-16% of any subgroup’s assertive acts.

Table 3. Assertive Illocutionary Acts by Personality Trait

SA Type		E	I	S	N	T	F	J	P
ST	Total	103	120	108	115	56	167	144	79
	SA	7	7	8	6	7	7	8	6
	%	18	18	18	18	18	18	20	15
SP	Total	81	88	66	103	46	123	104	65
	SA	5	5	5	6	6	5	5	5
	%	14	13	11	16	15	13	14	12
AT	Total	121	172	124	169	87	206	154	139
	SA	8	10	9	9	11	9	8	11
	%	21	26	21	26	28	22	21	27

SA Type		E	I	S	N	T	F	J	P
EL	Total	194	224	218	200	97	321	245	173
	SA	13	13	16	11	12	13	13	13
	%	33	34	36	31	32	34	34	33
IN	Total	87	60	87	60	21	126	82	65
	SA	6	4	6	3	3	5	4	5
	%	15	9	14	9	7	13	11	12

Note. SA = speech act, ST = stating, SP = speculating, AT = assessing truth, EL = elaborating, IN = informing, E = extraversion, I = introversion, S= sensing, N = intuition, T = thinking, F = feeling, J = judging, P = perceiving. Total = the total number of times this factor used this IA type. SA (speaker average) = the average amount of time this IA type was produced by a speaker with this factor. % (percentage of use) = given all the assertive SAs produced by this factor, this is the percentage of SAs that were this particular IA.

The correlation testing ($\alpha = .05$; Table 4) produced several statistically significant results. Specifically, the trait of judging was positively correlated with the percentage use of stating IAs ($r_{pb} = .38, p < .05$). This finding is further underscored by the fact that stating IAs comprised 20% of the assertive SAs produced by judges which was the highest percentage of stating IA use among all PTs (see Table 3). Informing IAs show significant associations with three PTs. Extraversion exhibited one of the strongest relationships in terms of percentage of production ($r_{pb} = .46, p < .01$). Additionally, sensing was significantly correlated with overall use of information IAs ($r_{pb} = .38, p < .02$) and feeling with the percentage use of informing IAs ($r_{pb} = .39, p < .03$).

Table 4. Assertive Illocutionary Act Correlation with Traits

PT	Stating		Speculating		Assessing Truth		Elaborating		Informing	
	f	%	f	%	f	%	f	%	f	%
E/I	.04	.12	.01	.04	.19	.18	.07	.08	.33	.46*
S/N	.19	.16	.18	.31	.12	.20	.21	.14	.38*	.22
T/F	.01	.13	.10	.08	.16	.17	.02	.02	.35	.39*
J/P	.36	.38*	.08	.20	.26	.15	.07	.03	.20	.26

Note. * $p < .05$, E/I = extraversion/introversion, S/N= sensing/intuition, T/F = thinking/feeling, J/P = judging/perceiving.

Directive IAs

A total of 298 directive IAs were observed. **Requests for Information (RI)** dominated every subgroup, comprising 56%–76% of their directive output. **Requests for Action (RA)** were less frequent but peaked among Introverts (48% of their directives) and thinkers (44%).

Table 5. Directive Illocutionary Acts by Factor

IA Type		E	I	S	N	T	F	J	P
RI	Total	99	88	89	98	46	141	107	80
	SA	7	5	6	5	6	6	6	6
	%	76	52	68	59	56	65	66	59
RA	Total	31	80	42	69	36	75	56	55
	SA	2	5	3	4	5	3	3	4
	%	24	48	32	41	44	35	34	41

Note. IA = illocutionary act, RI = request for information, RA = request for action, E = extraversion, I = introversion, S= sensing, N = intuition, T = thinking, F = feeling, J = judging, P = perceiving, W = women, M = men. Total = the total number of times this factor used this illocutionary act. SA (speaker average) = the average amount of times this illocutionary act was produced by a speaker with this factor. % (percentage of use) = given all the directive SAs produced by this factor, this is the percentage of SAs that were this illocutionary act.

The correlation testing (Table 6) showed that extraversion had a significant relationship with the percentage of use of requesting information IAs ($r_{pb} = .34, p < .04$).

Table 6. Request for Information and Request for Action Correlation with Traits

Personality Trait	Request for Information		Request for Action	
	<i>f</i>	%	<i>f</i>	%
E/I	.13	.34*	.36	.25
S/N	.19	.13	.06	.26
T/F	.04	.07	.26	.13
J/P	.01	.00	.08	.09

Note. * $p < .05$, E/I = extraversion/introversion, S/N= sensing/intuition, T/F = thinking/feeling, J/P = judging/perceiving.

In summary, several significant correlations were observed between specific MBTI traits and the use of particular IAs. The results reveal subtle ways in which personality may shape communicative behavior in English, discussed in the next section.

Discussion

This study provides evidence that SA analysis can shed light on how PTs manifest in dyadic spoken English-language interaction. The current findings reveal several significant relationships between MBTI traits and IA use. These results contribute to a growing body of work on English pragmatics and highlight how personality shapes communicative choices in English interactional settings. Another contribution of this study is the opportunity to expand upon the linguistic characterizations of these PTs, particularly as they function in English-language task-based communication. These notions are discussed further below.

One of the most novel findings was the association between the judging trait with percentage use of stating IAs. As noted in the literature review, this particular category of PTs has been proven difficult to link to linguistic production (Choong and Varathan 2021; Li et al. 2018). In this study, judges produced a higher percentage of stating IAs (i.e., utterances stated with confidence in their truth). This relationship is discordant with the description of the judging trait, where they are described as people who like to structure their actions (e.g., are task oriented, goal driven, prefer an orderly approach). We need now to understand the linguistic instantiation of these traits that do not manifest themselves directly. Based on the results of this study, we can theorize that judges may use language to impose structure on their external environment by focusing on concrete information. This may reflect an underlying cognitive strategy in which judges attempt to bring clarity and order to ambiguous tasks. Given the loosely structured nature of the puzzle task, where participants were presented with a goal (e.g., complete the puzzle) but minimal instruction, judges may have used stating IAs to externalize clarity and move the interaction toward goal completion. In this context, verbal communication functions as an extension of goal-oriented behavior for these individuals. Stating IAs may thus serve as a linguistic strategy to manage uncertainty by emphasizing what is certain in order to create a methodical approach to completing the task.

A broader pattern emerged around informing IAs, which were significantly correlated with the traits of feeling, sensing, and extraversion. Though these traits are theoretically distinct (none belong to the same binary class), they may lead to similar behaviors in conversation. It is also not uncommon for one linguistic behavior to correlate with multiple non-binary PTs. For instance, the use of positive emotion words has been linked to both extraversion and agreeableness (a Big Five trait domain) in lexicosemantic studies (Mairesse et al. 2007; Pennebaker and King 1999).

Feelers are described as individuals who are motivated to help others and attuned to others' emotional and interpersonal needs. One defining characteristic of the feeling trait is a heightened sensitivity to social and emotional cues, including those conveyed nonverbally. At the heart of hearer-directed informing IAs is the speaker's intention to share information they believe the hearer needs or would benefit from. We can speculate that feelers may use informing IAs as a way to offer assistance, whether in response to an explicit question or because they perceive, through subtle cues, that their partner needs the information.

The correlation between informing IAs and sensing is less intuitive. Descriptions of the sensing personality type do not clearly explain why sensors would produce a higher frequency of informing IAs compared to other assertive IA types. Sensing types are typically characterized as focusing on concrete, tangible information, which is a description that might more logically predict a stronger association with stating IAs. However, it is possible that sensors use informing IAs to ground the interaction in observable reality, though this connection warrants further investigation.

For extraverts, the connection to informing IAs is especially clear. Extraverts are characterized by their oriented toward communication and social engagement. Their use of informing IAs can be seen as a way of fulfilling their role as active contributors to the dialogue, whether by responding to questions or by volunteering information they believe will benefit their interlocutor. This pattern supports the idea that extraverts use informing IAs to sustain and enhance interaction, reflecting their underlying motivation for interpersonal connection. Further, the relationship between extraversion and the percentage of RI IAs supports several key characteristics that describe extraversion domain. Extraverts characteristically seek input from others and talk through problems out loud. In this study, the *problem* participants were solving was the puzzle task. We may speculate that extraverts used RIs to draw their partners into collaborative, out-loud problem-solving. Argyle and Lu (1990), in unpublished work, claimed that extraverts ask more questions than introverts, though this finding was not supported by Mairesse et al. (2007). Nonetheless, the extravert's characteristics of sociability, inclination to engage in discussion, and enjoyment of collaborative tasks align with the experimental setting of this study. Their frequent use of RIs may serve as a conversational tool, both to interact with others and to elicit participation.

The strong associations between extraversion and both RI (i.e., questioning) and informing IAs point to the inherently dialogic nature of this PT. From a broader psychological perspective, question/answer exchanges are seen as cooperative acts that enable knowledge building (advancing shared goals) through interaction (Boyce-Jacino and DeDeo 2022). The results suggest that extraverts are not merely exchanging information, but are actively engaging in social collaboration that aligns with their interpersonal orientation and supports collective task goals. Building on this, a persistent challenge in psychological and social science research on question/answering dialogue is the tendency to elicit this speech in controlled experiments, rather than observing it in natural contexts (Boyce-Jacino and DeDeo 2022). Although this study took place in an experimental context, its design prioritized capturing natural speech, rather than prompting participants to produce specific SAs, adding ecological validity to the findings.

Limitations and Future Research

Certain aspects of an individual's word choices and grammatical constructions have been shown to remain consistent across time and contexts, supporting the idea that such patterns can reflect stable psychological traits (Pennebaker et al.

2003). In contrast, Mischel (1968) argued that behavior is context-dependent and that PTs are broad, generalized constructs with limited predictive power across situations. This study adopts a middle ground, suggesting that linguistic-based personality research can be enriched by incorporating contextual analysis, helping bridge the gap between trait consistency and situational variability. Future research should explore PTs and linguistic production across a wider range of contexts and over longer time spans to test this integration more robustly.

Another issue concerns the overlapping associations between some linguistic variables and multiple PTs. As observed here, informing IAs were linked not only to extraversion but also to sensing and feeling. This supports prior findings (e.g., Mairesse et al. 2007; Pennebaker and King 1999) and raises a methodological concern: most studies examine traits in isolation. The observed overlap suggests potential interdependence between traits. Future research should consider analyzing personality profiles, rather than isolated traits, to better capture the complexity of language–personality relationships.

Regarding SAs and IAs, both can reflect an individual’s interpretation of the communicative context. This study examined IA use in a specific experimental setting, in which assertives were the dominant SA (65% of the data). SA patterns are likely to vary across different environments. For example, expressive SAs are the most common SA in social media contexts (Carr et al. 2012). Although this study makes a unique contribution by using spoken rather than written data, further research should examine speech in varied real-world and task-based contexts. As Dörnyei (2006) noted, the nature of a task may be biased toward certain PTs. This may partly explain why extraversion is frequently studied because it is naturally more observable in verbal, output-heavy tasks. Indeed, the more complex and interactive the task, the more likely it is to reveal associations with extraversion (Dewaele and Furnham 1999; Matthews 2004). Thus, context must be treated as a critical variable in studies of personality and language use.

Another potential limitation of this study is its relatively small sample size ($n = 32$). However, the SA dataset itself was large. Participants produced 1,953 SAs, an average of 61 per speaker, which exceeds comparable studies such as Appling et al. (2021), with 250 participants averaging 23 SAs, and Thorne (1987), with 104 participants averaging 21 SAs. Nonetheless, larger and more diverse participant samples are needed to increase generalizability. Additionally, due to the experimental design, the distribution of IA types and participant PTs could not be pre-determined, and as a result, several statistical tests were underpowered. However, given the exploratory aim of this study, this limitation is justifiable. Future studies may consider more controlled data collection methods, such as a double-blind approach in which one researcher knows the MBTI type and manages participant pairing, while another (blind to PT results) conducts the analysis. Further, alternative data sources, such as annotated conversational corpora with known PT profiles, may support and enhance the findings in this study.

The results of this study expand our understanding of how PTs influences the pragmatic behavior of American English speakers, specifically in a real-time, goal-oriented task. The study highlights the value of using SA theory to better understand the relationship between PTs and English language use, addressing

gap left by lexicosemantic approaches. Future work should explore whether these patterns hold across other discourse settings.

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