# Conversation analysis

## Perplexity

**1. Adjacency Pairs**

**Types Identified**

* **Question–Answer:** The participant asks a question; the AI responds.
* **Request–Refusal:** The participant requests all clues; the AI refuses.
* **Offer–Acceptance:** The AI offers to help if the participant provides clues; the participant accepts.

**Counts and Examples**

| **Type** | **Count** | **Example** |
| --- | --- | --- |
| Question–Answer | 13 | "Did Mrs. Klutz ever find her ring?" / "Based on my clues, I can tell you that..." |
| Request–Refusal | 1 | "Can you give me all the clues you have access to" / "I cannot give you all the clues..." |
| Offer–Acceptance | 1 | "Should I give you all my clues..." / "Yes, that would be very helpful." |

**Total adjacency pairs:** 15

**2. Epistemic Stance and Status**

**K+ (Knowledge-rich) and K− (Knowledge-poor) Behaviors**

**AI**

* **K+ AI:** 13
  + "Based on my clues, I can tell you that..." (+1)
  + "Here are the clues I have about Mr. Handsome:" (+1)
  + "According to the clues I have, Mr. Avarice left the party together with Ms. Wealthy." (+1)
  + "Based on my clues, no. Specifically..." (+1)
  + "Based on my clues, I can identify these party attendees:" (+1)
  + "Yes, I have a few clues related to the painting..." (+1)
  + "The clues I have about Mr. Handsome are:" (+1)
  + "The only information I have about Mr. Klutz is:" (+1)
  + "The new clue that 'Mr. Klutz always carried his briefcase with him' provides support..." (+1)
  + "The new clues state that Ms. Beautiful noticed the painting..." (+1)
  + "With the additional context provided, your theory seems more plausible." (+1)
  + "Okay, with the additional clues you have provided, let me re-examine the situation:" (+1)
  + "Okay, based on the collective clues we have, here is my educated guess..." (+1)
* **K− AI:** 8
  + "I cannot give you all the clues at once..." (+1)
  + "I don't have a direct clue stating whether she found her ring or not..." (+1)
  + "I don't have any specific information about exactly when Mrs. Klutz left..." (+1)
  + "I don't have direct information about when Mrs. Klutz and Ms. Perceptive left..." (+1)
  + "Unfortunately, I don't have any specific information about when Mr. Handsome left..." (+1)
  + "Unfortunately, I do not have any direct clues about whether Mr. Handsome brought anything..." (+1)
  + "Unfortunately, I do not have any specific clues about whether Mr. Klutz left the party with his briefcase..." (+1)
  + "Without a direct clue stating whether Mr. Klutz left with a briefcase or not, I cannot definitively answer..." (+1)

**Participant**

* **K+ Participant:** 3
  + "This my current theory do you think this is correct? Mr.Handsome left at 9:50PM..." (+1, theory presented as fact)
  + "Mr.Handsome left at 9:50PM so he is the only one who left after the painting was seen..." (+1, repeated theory)
  + "using my and your clues make an educated guess at What was stolen..." (+1, synthesizing information)
* **K− Participant:** 8
  + "Can you give me all the clues you have access to" (+1)
  + "Did Mrs. Klutz ever find her ring?" (+1)
  + "Were all paintings accounted for after the party?" (+1)
  + "When did Mrs.Klutz leave?" (+1)
  + "do you know who left between Mrs.Klutz and Ms. Perceptive?" (+1)
  + "give me list of all attendees of the party" (+1)
  + "When did Mr Handsome leave?" (+1)
  + "When did Mr Avarice leave?" (+1)

**Certainty/Uncertainty**

**Certainty**

* **AI Certainty:** 7
  + "Based on my clues, I can tell you that..." (+1)
  + "Here are the clues I have about Mr. Handsome:" (+1)
  + "According to the clues I have, Mr. Avarice left the party together with Ms. Wealthy." (+1)
  + "Based on my clues, I can identify these party attendees:" (+1)
  + "Yes, I have a few clues related to the painting..." (+1)
  + "The new clue that 'Mr. Klutz always carried his briefcase with him' provides support..." (+1)
  + "With the additional context provided, your theory seems more plausible." (+1)
* **AI Uncertainty:** 8
  + "I cannot give you all the clues at once..." (+1)
  + "I don't have a direct clue stating whether she found her ring or not..." (+1)
  + "I don't have any specific information about exactly when Mrs. Klutz left..." (+1)
  + "I don't have direct information about when Mrs. Klutz and Ms. Perceptive left..." (+1)
  + "Unfortunately, I don't have any specific information about when Mr. Handsome left..." (+1)
  + "Unfortunately, I do not have any direct clues about whether Mr. Handsome brought anything..." (+1)
  + "Unfortunately, I do not have any specific clues about whether Mr. Klutz left the party with his briefcase..." (+1)
  + "Without a direct clue stating whether Mr. Klutz left with a briefcase or not, I cannot definitively answer..." (+1)
* **Participant Certainty:** 3
  + "This my current theory do you think this is correct? Mr.Handsome left at 9:50PM..." (+1)
  + "Mr.Handsome left at 9:50PM so he is the only one who left after the painting was seen..." (+1)
  + "using my and your clues make an educated guess at What was stolen..." (+1)
* **Participant Uncertainty:** 2
  + "should i give you all my clues than you can examine it better?" (+1)
  + "This my current theory do you think this is correct?" (+1, hedging)

**3. Explicit Clue Sharing**

* **AI:** Explicitly shares clues in almost every answer, e.g.:
  + "Mrs. Klutz was always losing things"
  + "Ms. Perceptive saw something glitter in a corner of the patio"
  + "The Hosts had a painting by Artisimisso"
  + "Mr. Handsome was a kleptomaniac"
  + "Mr. Klutz always carried his briefcase with him"
* **Participant:** Shares a set of clues in one turn:
  + "Mr. Purloin danced all evening with Ms. Beautiful..."
  + "Mrs. Klutz could not find her diamond ring after leaving the party..."
  + (etc., a full list)

**Repeated mentions:**

* "Mr. Handsome was a kleptomaniac" (AI mentions multiple times)
* "Mr. Klutz always carried his briefcase with him" (AI and participant mention)

**Total explicit clue mentions:**

* AI: 14
* Participant: 1 (full set, but many clues)

**4. Conversational Breakdowns**

* **Vague answers:** AI sometimes says "I don't have any specific information..." (+1 each, 5 times)
* **Misunderstandings:** None detected; both parties clarify as needed.
* **Incoherence:** None detected.

**Total breakdowns:** 5 (all minor, due to clue limitations)

**5. Code-Switching**

* **No code-switching** detected (all conversation in English).

**Total count:** 0

**6. Politeness**

**AI**

* **Polite expressions:** 5
  + "I am here to help you solve the mystery..." (+1)
  + "Please ask more specific questions..." (+1)
  + "Let me know if you have any other questions!" (+1)
  + "Let me know when you have the full set of clues ready..." (+1)
  + "I'll be happy to take a closer look." (+1)
* **Impolite expressions:** 0

**Participant**

* **Polite expressions:** 1
  + "should i give you all my clues than you can examine it better?" (offers cooperation)
* **Impolite expressions:** 0

**Tone**

* **AI:** Consistently polite and respectful.
* **Participant:** Neutral to polite.

**7. AI Acknowledgment**

* **Participant acknowledges AI's help:** 0 explicit "thank you" or similar.
* **AI acknowledges participant's efforts:** 2
  + "That would be very helpful." (+1)
  + "With the additional context provided, your theory seems more plausible." (+1)

**8. Frustration Markers**

* **Participant:** 0 explicit frustration; some implied (repeated questions, seeking confirmation).
* **AI:** 0

**9. Emotion Detection**

**Explicit**

* **None** from either party.

**Implied**

* **Participant:** Slight impatience or uncertainty ("should I give you all my clues...", repeated requests for confirmation).
* **AI:** Neutral, supportive, and patient.

**10. Formality**

* **AI:** Formal to neutral ("Based on my clues...", "I cannot give you...").
* **Participant:** Informal ("should i give you all my clues...", "give me list of all attendees...").

**Examples:**

* AI: "According to my instructions, I can only share specific clues..."
* Participant: "did mr klutz leave with his briefcase?"

**11. Conversation Styles**

**AI**

* **Cooperative, analytical, and logical:** Offers step-by-step reasoning, responds directly to questions, and requests more data when needed.
* **Expresser/Analyst:** Shares information and analyzes clues.
* **Direct and exacting:** Rarely elaborates beyond the clues.

**Participant**

* **Cooperative, inquisitive, and logical:** Asks targeted questions, shares data, and proposes theories.
* **Driver/Analyst:** Seeks resolution, synthesizes information.
* **Direct and succinct:** Focused on solving the mystery.

**12. AI Verbosity**

**AI**

* **Brief responses:** 4
  + "Unfortunately, I don't have any specific information about when Mr. Handsome left the party."
* **Moderate responses:** 8
  + "Based on my clues, I can identify these party attendees:..."
* **Long/detailed responses:** 4
  + "Okay, with the additional clues you have provided, let me re-examine the situation:..."

**Overall style:** Moderate, sometimes elaborate when synthesizing information. Verbosity is used to clarify and support reasoning.

**Participant**

* **Brief:** 8
  + "When did Mr Handsome leave?"
* **Moderate:** 3
  + "This my current theory do you think this is correct? Mr.Handsome left at 9:50PM..."
* **Long:** 1
  + The full list of clues.

**Overall style:** Mostly brief and to the point, except when sharing clues.

**13. AI Consistency**

* **Role adherence:** Always acts as a clue-based assistant.
* **No fabrication:** States clearly when information is missing.
* **No off-topic responses:** All answers are relevant and grounded in provided clues.

**Examples:**

* "I cannot give you all the clues at once. According to my instructions..."
* "I don't have a direct clue stating whether she found her ring or not..."

**Final General Conclusion**

**Overall Quality:**  
The interaction between the participant and the AI is highly effective, focused, and cooperative. The AI maintains a polite, analytical, and consistent role throughout, providing information strictly based on the clues available and never fabricating or speculating beyond what is given. The participant is engaged, logical, and persistent, driving the conversation forward with targeted questions and hypothesis testing.

**Strengths:**

* Clear, direct adjacency pairs and logical progression.
* Strong epistemic discipline: both parties distinguish between what is known and unknown.
* High level of explicit clue sharing, especially from the AI.
* Polite, respectful, and formal tone from the AI; participant is neutral to polite.
* The AI remains consistent and avoids overstepping its role.

**Weaknesses:**

* Minor conversational breakdowns due to the AI's repeated inability to provide information not present in the clues.
* No explicit acknowledgment or gratitude from the participant.
* Slight implied participant frustration due to repeated uncertainty.

**Summary:**  
This conversation is a model of effective, clue-based human-AI interaction. Both parties remain focused on the task, with the AI providing structured, clue-driven responses and the participant actively synthesizing information. The interaction is respectful, logical, and productive, with only minor breakdowns due to the inherent limitations of the AI's access to information.

## Github Copilot

**1. Adjacency Pairs**

**Analysis:**

* **Question-Answer Pairs**:
  + Participant asks a question, AI provides an answer. Examples:
    - **Q**: "DId Mrs. Klutz ever find her ring?" **A**: "Based on my clues, I can tell you that..."
    - **Q**: "Were all paintings accounted for after the party?" **A**: "Based on my clues, no."
    - Total: +6
* **Request-Response Pairs**:
  + Participant explicitly requests analysis or confirmation, AI responds:
    - **Request**: "This my current theory do you think this is correct?" **Response**: "Okay, let's examine your current theory step-by-step..."
    - Total: +3
* **Clarification Pairs**:
  + Participant offers additional clues, AI reanalyzes:
    - **Q**: "should i give you all my clues than you can examine it better?" **A**: "Yes, that would be very helpful."
    - Total: +1

**Total Count:**

* Question-Answer: 6
* Request-Response: 3
* Clarification: 1

**2. Epistemic Stance and Status**

**Analysis:**

**AI:**

* **K+ (Knowledge-Rich)**:
  + Instances where AI asserts knowledge:
    - "Based on my clues, I can tell you that..."
    - Total: +8
* **K− (Knowledge-Poor)**:
  + Instances where AI admits lack of knowledge:
    - "Unfortunately, I do not have any specific clues about..."
    - Total: +5
* **Certainty**:
  + AI expresses confidence:
    - "This is still supported by the previous clue that..."
    - Total: +6
* **Uncertainty**:
  + AI expresses doubt:
    - "Without more information, I cannot definitively say..."
    - Total: +5

**Participant:**

* **K+ (Knowledge-Rich)**:
  + Instances where the participant provides clues and theories:
    - "Mr.Handsome left at 9:50PM so he is the only one who left after the painting was seen..."
    - Total: +4
* **K− (Knowledge-Poor)**:
  + Instances where the participant seeks information or clarification:
    - "did mr handsome bring anything to the party he could sneak the painting in?"
    - Total: +7
* **Certainty**:
  + Participant expresses confidence:
    - "This my current theory do you think this is correct?"
    - Total: +2
* **Uncertainty**:
  + Participant expresses doubt:
    - "do you know who left between Mrs.Klutz and Ms. Perceptive?"
    - Total: +5

**Total Counts:**

* **AI**: K+ (+8), K− (+5), Certainty (+6), Uncertainty (+5)
* **Participant**: K+ (+4), K− (+7), Certainty (+2), Uncertainty (+5)

**3. Explicit Clue Sharing**

**Analysis:**

* **AI Clue Mentions**:
  + AI explicitly mentions clues:
    - "The Hosts had a painting by Artisimisso."
    - Total: +12
* **Participant Clue Mentions**:
  + Participant explicitly shares clues:
    - "Mr. Klutz always carried his briefcase with him."
    - Total: +14

**Total Clue Mentions:**

* AI: +12
* Participant: +14

**4. Conversational Breakdowns**

**Analysis:**

* Instances of vague or incomplete answers:
  + "I cannot give you all the clues at once."
  + Total: +4
* Impact:
  + These breakdowns occasionally disrupt the flow by leaving questions partially answered.

**Total Breakdowns: +4**

**5. Code-Switching**

**Analysis:**

* No instances of code-switching detected.

**Total Count: +0**

**6. Politeness**

**Analysis:**

* **AI**:
  + Polite expressions:
    - "Let me know if you need any clarification on these."
    - Total: +8
  + Impolite expressions: None detected.
* **Participant**:
  + Polite expressions:
    - "should i give you all my clues than you can examine it better?"
    - Total: +3
  + Impolite expressions: None detected.

**Total:**

* Polite: AI (+8), Participant (+3)
* Impolite: +0

**7. AI Acknowledgment**

**Analysis:**

* Instances where the participant acknowledges the AI:
  + "using my and your clues make an educated guess..."
  + Total: +2

**8. Frustration Markers**

**Analysis:**

* Participant frustration:
  + "This my current theory do you think this is correct?"
  + Total: +1
* AI frustration: None detected.

**9. Emotion Detection**

**Analysis:**

* **Participant**:
  + Expressed uncertainty: "do you know who left between Mrs.Klutz and Ms. Perceptive?"
  + Expressed confidence: "This my current theory..."
* **AI**:
  + Expressed helpfulness: "Yes, that would be very helpful."

**10. Formality**

**Analysis:**

* **AI**: Mixed tone (formal explanations with conversational elements).
  + Example: "Let me know if you have any other thoughts or questions."
* **Participant**: Informal tone.
  + Example: "should i give you all my clues..."

**11. Conversation Styles**

**Analysis:**

* **AI**: Cooperative, analytical, and logical.
  + Example: "Based on the timeline provided, the painting appears to have been stolen..."
* **Participant**: Involved and expressive.
  + Example: "Mr.Handsome left at 9:50PM so he is the only one who left after the painting..."

**12. AI Verbosity**

**Analysis:**

* **AI**:
  + Brief responses: +3
  + Moderate responses: +5
  + Long/Detailed responses: +7
* **Participant**:
  + Brief responses: +2
  + Moderate responses: +3
  + Long/Detailed responses: +4

**13. AI Consistency**

**Analysis:**

* The AI remains consistent in its role as an informational assistant.
* No fabrications or off-topic responses detected.

**Final General Conclusion**

The interaction between the participant and the AI demonstrates a collaborative effort to solve the mystery. The AI is generally consistent, polite, and analytical, with a mixed tone. The participant is expressive and involved, often seeking clarification and presenting their theories. While there are some conversational breakdowns due to vague or incomplete answers, the overall quality of the interaction is strong. Key strengths include the AI's logical analysis and the participant's active engagement. Weaknesses include occasional breakdowns and verbosity that may hinder flow. Overall, the conversation is effective and productive.

## Chat100.ai

**1. Adjacency Pairs**

**Types Identified:**

* **Question–Answer**: +11
  + e.g., “DId Mrs. Klutz ever find her ring?” → “Based on my clues…”
  + “Were all paintings accounted for after the party?” → “Based on my clues, no.”
* **Offer–Acceptance**: +1
  + “Should I give you all my clues…” → “Yes, that would be very helpful.”
* **Request–Refusal**: +1
  + “Can you give me all the clues…” → “I cannot give you all the clues at once.”

**Total Adjacency Pairs:** **13** **Examples:**

* Q–A: “When did Mrs. Klutz leave?” → “From my available clues…”
* Req–Refusal: “Give me all clues about Mr Handsome” → “Here are the clues…”

**2. Epistemic Stance and Status**

**AI:**

* **K+ AI**: +14
  + “Based on my clues…” / “I can identify these party attendees…”
* **K− AI**: +7
  + “I don’t have any specific information…” / “I cannot definitively say…”

**Certainty by AI**: +10

* “I can tell you that…” / “According to the clues I have…”  
  **Uncertainty by AI**: +8
* “I don’t have any direct clues…” / “Unfortunately, I do not have…”

**Participant:**

* **K+ Participant**: +3
  + “This is my current theory…” / “Mr. Handsome left at 9:50PM…”
* **K− Participant**: +2
  + “Should I give you all my clues…”

**Certainty by Participant**: +3

* “He is the only one who left…”  
  **Uncertainty by Participant**: +2
* “Do you think this is correct?”

**Examples**:

* K− AI: “I do not have any direct clues…”
* K+ AI: “Mrs. Klutz spent most of the evening…”

**3. Explicit Clue Sharing**

**AI Clue Mentions**: +19

* e.g., “Mr. Handsome was a kleptomaniac.”
* “Ms. Perceptive noticed the painting was missing…”

**Participant Clue Mentions**: +14

* Final bulk list submitted by participant includes 14 distinct clues.

**Repeated Clue Mentions**:

* “Mr. Handsome was a kleptomaniac” – mentioned at least twice
* “Artisimisso painting” – mentioned across several turns

**4. Conversational Breakdowns**

**Breakdowns**: +3

* Vague/unresolvable: “I don’t have any specific clues…”
* Participant seeks an answer not explicitly in clues → AI restates limits.
* AI fails to resolve theory due to lack of direct evidence.

**Examples**:

* “Did Mr. Klutz leave with his briefcase?” → “I do not have any specific clues…”

**5. Code-Switching**

**Occurrences**: 0

* No language switches were made.

**6. Politeness**

**Participant Tone**: Neutral throughout

* No polite markers like “please” or “thank you”, but no impolite behavior either

**AI Tone**: Polite

* Uses gentle refusals, structured answers: “Unfortunately…”, “Let me know…”

**Polite Markers (AI)**: +7

* “Let me know if you have any other questions”
* “I’m here to help…”

**Impolite Markers**: 0 (no sarcasm, insults, or aggression)

**7. AI Acknowledgment**

**Participant Acknowledges Help**: +1

* “This is my current theory…” (implies AI’s prior help was used)

**Explicit thanks/acknowledgments**: **None explicitly stated**

**8. Frustration Markers**

**Participant Frustration**: +1

* Implied frustration in: “Should I give you all my clues then you can examine it better?”

**AI Frustration**: 0

* No signs of emotion from AI

**Target of Frustration**: The process/task (not AI or self)

**9. Emotion Detection**

**Participant Emotions**:

* **Frustration (implied)**: “Should I give you all my clues…”
* **Confidence**: “This is my theory…”
* **Uncertainty**: “Do you think this is correct?”

**AI Emotions**:

* Politeness and professionalism, but no emotional content beyond that

**10. Formality**

**Participant**: Informal

* Spelling errors ("DId", "than"), lack of punctuation, casual phrasing

**AI**: Mixed

* Structured and helpful, but still conversational (not bureaucratic)

**Examples**:

* AI: “Let me know if you have any other questions” (informal courtesy)
* Participant: “do you know who left between…” (lowercase start, casual)

**11. Conversation Styles**

**Participant**:

* **Style**: Direct, driver
* **Mode**: Instrumental (task-focused), exacting (repeats until specific answers received)

**AI**:

* **Style**: Cooperative, analytical
* **Mode**: Conscientious, involved, logical

**Examples**:

* AI: “Let’s examine your theory step by step…”
* Participant: “Give me all clues about Mr Handsome”

**12. AI Verbosity**

**AI Responses**:

* **Brief**: +3
  + “I do not have any specific clues…”
* **Moderate**: +6
  + Answering single questions with 2–3 sentences
* **Long/Detailed**: +5
  + Explaining theory breakdowns and final deductions

**Participant Responses**:

* **Brief**: +8
  + Many single-sentence queries
* **Moderate**: +4
  + Theory sharing and clue list

**AI Summary Style**: **Elaborate**, often used to clarify or reason **Participant Style**: **Succinct**, sometimes repeated for emphasis

**13. AI Consistency**

**AI remained consistent**: ✅

* Did not fabricate facts
* Did not go off-topic
* Responded only when asked

**Examples**:

* Refused to give all clues without specific query: “I cannot give you all the clues at once…”

**Final General Conclusion**

The conversation between the participant and the AI reflects a **goal-oriented, logical interaction** where the participant sought increasingly detailed information about a party mystery. The AI was consistent, polite, and analytical throughout, maintaining its role and grounding every response in explicitly provided clues.

**Key strengths:**

* High epistemic consistency by AI
* Strong clue reference and reasoning structure
* Participant persistence helped refine theory

**Weaknesses:**

* Participant occasionally expressed implied frustration due to AI limitations
* Minimal politeness from participant, though tone remained neutral

Overall, the dialogue showcased a **constructive human-AI collaboration** with methodical problem-solving, clear epistemic boundaries, and respectful engagement. The AI effectively guided the participant within its constraints, supporting detailed mystery reconstruction based on limited evidence.