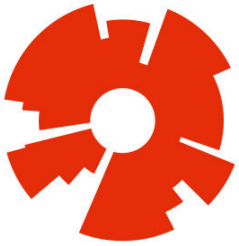

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Assignment 2

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Contents

1 Natural Discourse

1.1 Discussion

1) In my view, to create a sufficient record of face-to-face discourse that fully captures what took place, it's essential to clearly structure the dialogue, emphasizing each speaker and incorporating non-verbal elements wherever possible—though without turning it into a novel. Non-verbal cues, like pauses to think, facial expressions, eye movements, and gestures, are important as they add emphasis and, in this case, help speakers reinforce their points and substantiate their arguments.

2) I believe I included as much as possible to make the discourse clear and understandable. Being my first time doing a transcript like this, I might have overlooked a few details, such as more nuanced facial expressions or particular glances, especially from Sam. Sam seemed to rely on non-verbal cues to communicate certain sentiments or thoughts, often more powerfully than with his words alone.

3) No, the chosen video was well-shot and of high quality, which made it easier to capture all elements accurately. YouTube's subtitle generation helped clarify one segment I initially found unclear, but apart from that, I had no trouble understanding or transcribing due to the quality of the video and audio.

4) Yes, absolutely. As mentioned, Sam relied heavily on non-verbal language, especially when thinking or conveying certain ideas. I did my best to observe and transcribe these parts, though, as a first-timer, I'm not yet skilled at this. However, I tend to notice non-verbal cues, like small mouth movements, facial expressions, eye shifts, and gestures, which helped me identify them accurately. The main challenge was incorporating these cues seamlessly into the transcript. Despite this, I think I managed to describe these non-verbal elements thoroughly enough to make the transcript understandable.

1.2 Reflection on Computation

Even with perfect speech and word recognition, a computer would face significant challenges participating effectively in this discourse due to the nuanced non-verbal cues and context-driven shifts in meaning. For instance, Sam's gestures, pauses, and changes in tone are essential for conveying his thought process and emphasis on certain ideas, which a computer may struggle to interpret as more than superficial actions. Joe's skeptical murmur, paired with his slight frown and downward glance, suggests doubt—something a computer might miss without a sophisticated understanding of human expressions. Additionally, discourse often includes rhetorical or indirect questions (e.g., Joe's "What were your initial thoughts?") that rely on shared human understanding. This conversation also contains context-specific language, like "AGI" and "universal basic income," which a computer might recognize textually but not comprehend in depth. To follow and engage meaningfully, the computer would need not only perfect speech recognition but also an advanced ability to interpret gestures, tones, pauses, and the subtle motivations underlying the speakers' interactions.

2 Discourse Structure

2.1 Segment Analysis Task

Segment	1. Strongest Evidence for Separate Segment	2. Start Signaled with Connective?	3. End Signaled with Connective?	4. Linear or Hierarchical?
A	Introduction of a new question by Joe, creating a distinct purpose within the discourse to establish the topic of job displacement due to AI. This segment stands rhetorically as an initial inquiry that shapes the dialogue that follows.	No explicit connective, though Joe's shift to looking directly at Sam is a nonverbal cue for emphasis.	Joe's interruption signals the end as he redirects Sam to focus on a specific point.	Linear; starts a new topic in the conversation.
B	Sam reflects on past predictions about AI's progression. The segment's purpose is to provide historical context and illustrate Sam's evolving views, contrasting with his current thoughts on AI. It stands rhetorically as a justification for his views.	Begins implicitly with Sam's distant look, which signals recollection and change in focus.	Ends with Joe's interruption, which redirects back to the core question.	Linear; follows Joe's inquiry and continues his thread of questioning.
C	Sam elaborates on solutions for displaced workers, touching on universal basic income and other social support systems. This segment provides a direct response to the societal impacts Joe highlighted.	Begins with "Yet," which signals a shift in tone to acknowledge immediate challenges for displaced workers.	No explicit connective, but Sam's pause and shift to talking about AGI indicates the transition.	Linear; responds directly to Joe's question but develops the topic with new solutions.
D	Conclusion of Sam's thoughts on AGI's potential and the social restructuring it may entail. This segment finalizes his perspective on sharing both AGI's benefits and governance, emphasizing a societal vision.	Not explicitly signaled; the segment feels like a conclusion given Sam's "And so" indicating summation.	Ends with "the more your little one 18-billionth ownership is worth," a rhetorical ending with finality.	Hierarchical; serves as a concluding reflection embedded in the broader discourse on job displacement and societal adjustment.

Table 1: Segment Analysis Table

2.2 Discussion

1) Another Person's Segmentation: It's likely that another person might place boundaries in similar locations, particularly where there are explicit signals, such as interruptions, rhetorical shifts, or connectives like "Yet" and "And so." These cues naturally mark a shift in focus or tone, which most people would recognize as boundary indicators. However, differences may arise in segments where the cues are more subtle or rely on non-verbal behaviors (e.g., Joe's downward glance or Sam's distant look). Another person might interpret these differently or overlook them entirely, leading to boundary variations. For example, segment B relies on Sam's distant look to signal a reflection on past beliefs, which someone else might see as part of an ongoing conversation rather than a distinct section.

2) Possibility of a Computer Algorithm for Segmentation: Creating an algorithm that performs this segmentation would be challenging but feasible with advanced natural language processing models. Algorithms could detect discourse connectives like "Yet" and interruptions, which are clear indicators of boundaries. However, capturing non-verbal cues (e.g., eye contact, pauses, gestures) would be difficult since it requires understanding visual and contextual subtleties that aren't explicitly verbal. Although algorithms could potentially identify explicit connectives and transitions, accurately segmenting based on more nuanced, human-like interpretations (like the perceived intent behind Sam's "distant look") might still be beyond current AI capabilities. Consequently, while an algorithm might replicate many segmentation choices, it would likely miss subtler boundaries or misinterpret relationships within the conversation.

3 Discourse Function vs. Device

3.1 Classification Task

- **Refusing to do something** - Discourse Function
  (It serves a purpose within the conversation, specifically to convey rejection or refusal.)
- **Using the words "Absolutely not"** - Discourse Device
  (The phrase "Absolutely not" is a linguistic device used to perform the function of refusal.)
- **Pointing at a tree** - Discourse Device
  (Pointing serves as a non-verbal means to direct attention, aiding the function of reference.)
- **Making someone aware you are listening** - Discourse Function
  (This is a communicative purpose, showing engagement or acknowledgment within the conversation.)
- **Directing attention to an open door** - Discourse Function
  (The purpose is to redirect the listener's focus to a specific object or area.)
- **Uttering the exclamation "Aha!"** - Discourse Device

(The exclamation is a verbal device used to indicate understanding or realization.)
- **Following someone with your eyes** - Discourse Device
  (Eye movement serves as a non-verbal cue, helping to convey attentiveness or engagement.)
- **Taking the turn** - Discourse Function
  (This represents the purpose of managing conversation flow, specifically assuming the speaking role.)
- **Smiling and raising eyebrows** - Discourse Device
  (Facial expressions are non-verbal devices that help convey emotions or reactions.)
- **Inviting a friend to have a conversation** - Discourse Function
  (This action represents the purpose of initiating dialogue with someone else.)

3.2 Spotting Examples

- **Eye Contact** (Joe making direct eye contact with Sam while interrupting):
  Function: This device is used to assertively gain control of the conversation, signaling Joe's desire to redirect the discussion to a specific point or area of interest.
- **Gesture** (Sam gesturing with his right hand while organizing his thoughts):
  Function: This gesture serves to emphasize Sam's thought process, helping the listener follow his reasoning as he prepares to respond thoughtfully.
- **Pause** (Sam briefly pausing before continuing his point in Segment C):
  Function: The pause functions as a means of reflection and emphasis, signaling a shift in tone as Sam moves from discussing potential solutions to addressing the immediate concerns of job loss.
- **Exclamation** ("Aha!" or similar verbal exclamations, as in Sam's emphasis on "whole universe of possibility"):
  Function: Exclamations serve to highlight enthusiasm and underscore the speaker's belief or excitement about the subject, adding emotional weight to the discourse.
- **Facial Expression** (Joe's slight frown and downward glance indicating skepticism):
  Function: Joe's facial expression conveys his doubt or reservation about Sam's ideas, allowing him to communicate a nuanced reaction without verbally interrupting.