Meaning and attention

Description

Understanding and misunderstandings in conversation are often attributable to what people emphasise as they speak and listen. People in conversation may tailor their responses depending on where their conversational partners place emphasis as they speak.

Consider a fragment of the dialogue about urban glare introduced in an earlier post (AI scripts a debate about urban glare). Martha said â??You know, Mark, every time I walk through the city, I canâ??t help but marvel at how the sunlight reflects off these glass buildings.â?•

How might Mark have responded had Martha placed emphasis on certain words in that sentence, by vocal emphasis, pauses or gestures?

Had the emphasis resided with the word â??walkâ?• then Mark may have responded â??Itâ??s true, walking through the city really gives you a different perspective on how the reflections play out compared to driving.â?•

Had she emphasised â??marvelâ?•, then the response could have been â??I understand why you marvel at it; the way the light dances on the glass can be mesmerizing.â?•

Had she emphasised â??these,â?• Mark might have replied â??Yes, these specific buildings do have a particularly striking way of catching the light.â?• Where the speaker places emphasis can indeed influence meaning.

â??Meaningâ?• is a difficult term, especially in automated LLMs. Rather that speak of â??meaningâ?• in the case of non-human agents, itâ??s more helpful to assert that where you place emphasis influences a response from the other agent in the conversation and affects the course of the conversation.

The distribution of attention

Emphasis draws attention to different parts of a sentence. People in conversation deploy various means of drawing attention and to greater or lesser degrees across a sentence or whole block of dialogue. As indicated in Markâ??s alternative responses, directing attention inflects the response to the other personâ??s statements. Any utterance may be inflected with a distribution of greater or lesser attention points.

Such attention distributions are not be always on the side of the speaker. Listeners may infer distributions of attention of their own, projecting their own biases and inferences onto what they hear.

How is attention managed in the case of conversational exchanges conducted by text only, as in the case of dialogue within chat rooms, text messaging and microblogging (WhatsApp, Twitter, X)? Letâ??s disregard the introduction of markups, emojis and other extra linguistic cues. Without those aids, the *context* of fragments of text assumes particular importance.

As I explored in a previous post, LLMs construct alternative attention distributions for blocks of text based on the calculated semantic relationships between words, and their positions within a block of text (Attention scores). Such attention mechanisms affect significantly the platformâ??s ability to predict convincingly what should come next in its generation of text responses, and thereby continue the conversation.

Here Iâ??ve downplayed the implication that attention contributes to *meaning*. Learning from LLMs, itâ??s sufficient to claim that attention influences what comes next in a conversation, how speaker and listener respond as they take turns.

Bibliography

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Note

Featured image was generated by ChatGPT: â??Here is the banner image for your blog post. It captures the retro, photorealistic, industrial aesthetic you described, highlighting both the beauty and the harshness of the glare from the tall glass buildings in Melbourne.â?•

Category

1. Artificial Intelligence

Tags

1. attention
2. city
3. meaning
4. urbanism

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