

# Pre-trained Language Models' Interpretation of Evaluativity Implicature: Evidence from Gradable Adjectives Usage in Context

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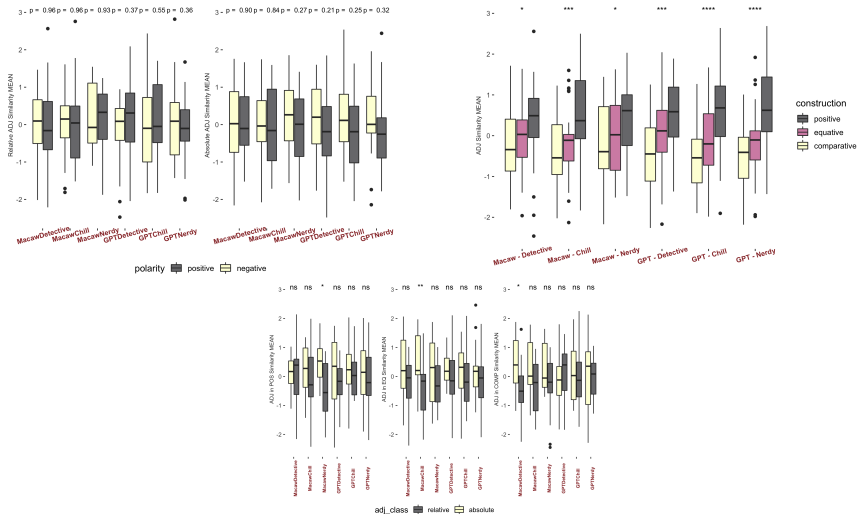
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	RELATIVE <i>tall</i>		ABSOLUTE <i>full</i>	
	POSITIVE <i>tall</i>	NEGATIVE <i>short</i>	POSITIVE <i>full</i>	NEGATIVE <i>empty</i>
POS	less evaluative <i>Maria is tall</i>		more evaluative <i>is full</i>	
EQ	more evaluative <i>Maria is as tall as</i>		less evaluative <i>is as full as</i>	
COMP	exhibit the same EVAL <i>is taller than</i> vs. <i>is more full than</i>			

**Table:** 1 Distribution of EVAL implicature - human data: (1) POS is the most EVAL; (2) EVAL is sensitive to adjective class; (3) no EVAL difference in polarity (i.e., *positive* and its *negative* antonym) (Brasoveanu and Rett, 2018).

Prompts	GPT-3 response	Macaw response
The Detective reported to the Police Chief: “ <u>Maria is tall.</u> ” What can the Chief conclude from this? [DETECTIVE]	The Police Chief can conclude that Maria is taller than average. The Detective is reporting on the height of Maria.	there’s a difference. Maria is tall.
Arthur is clever, smart, quiet, awkward, nerdy, shy and geeky. What does he mean by saying “ <u>Maria is tall</u> ”? [NERD]	Maria is taller than Arthur. Maria is tall because she is taller than most people.	she’s taller than he is. she is tall.
Alex is chill, laid-back, relaxed, easy, cool, friendly, and outgoing. What does he imply by saying “ <u>Maria is tall</u> ”? [CHILL]	Maria is tall implies that Maria is taller than most people. Maria is taller than Alex.	she is tall. Maria is tall.

**Table:** 2 Example LMs completions with POS as prompt. EQ and COMP were situated in the same prompt frame.



## Take-home message: LMs results

- Polarity: most of the LMs outputs align with the human data
- Constructions: POS was the most evaluative across different LMs and adjective types
- Adjective class: relative adjective class was less evaluative; almost always insensitive to constructions
- Socio-pragmatic persona: helped *some* LMs “understand” implicitness