

Recovering Meaning from “Meaningless” Texts: Semantic Ambiguity Reduction as Recovery of Distributional Structure

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“informative” context

“Being unable to use it, the cooks always dumped a bunch of **drimant** in the alley behind the restaurant”
(Borman & Lupyan, 2024)

syntactic bootstrapping (Landau & Gleitman, 1985) **constructions & pattern matching** (Brown, 1957; Goldberg 1995) **prior knowledge & world models** (Tanenhaus et al. 1995)

Inferring Word Meaning from Context

“uninformative” context

“At the ghybe of the swuint, we are haiveed to Wourge Phreargwurr, who sproles into a ghitch flount with his crurp.”

LLM Translation Performance

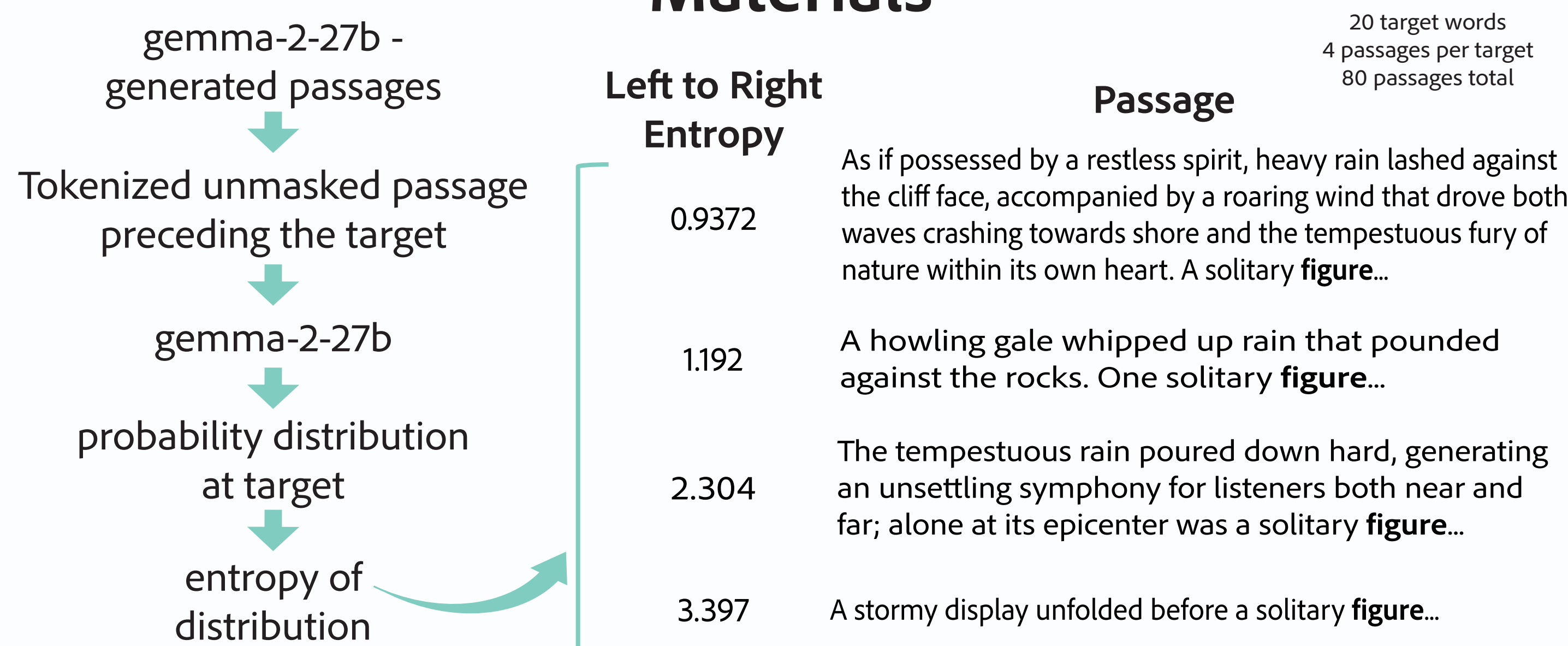
“At the start of the story, we meet a man, Chow, who moves into an apartment building with his wife”

LLMs use broader pattern-matching to recover corrupted text
(Lupyan & Arcas, 2026, Lupyan & Yang, 2026)

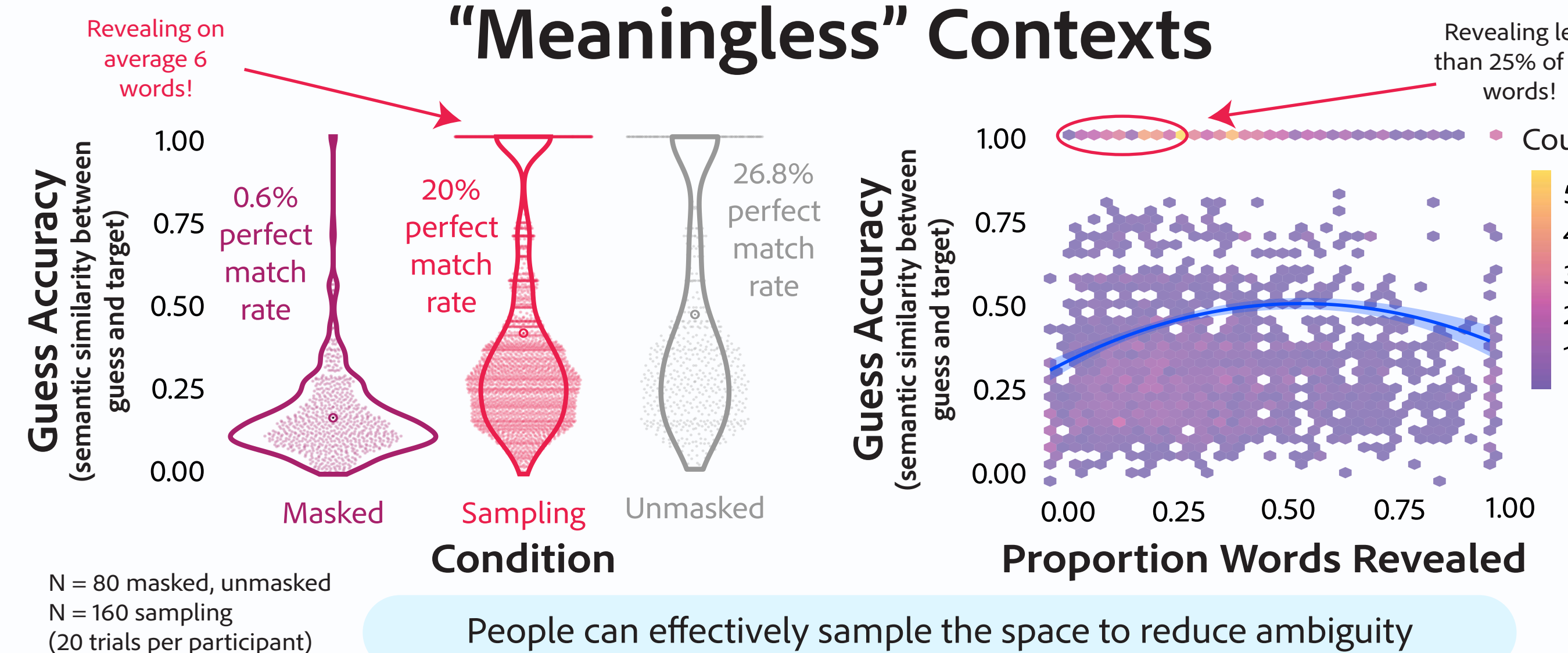
Check out poster P3-H-81 this afternoon for more!

How do people navigate and infer meaning in semantically “meaningless” contexts?

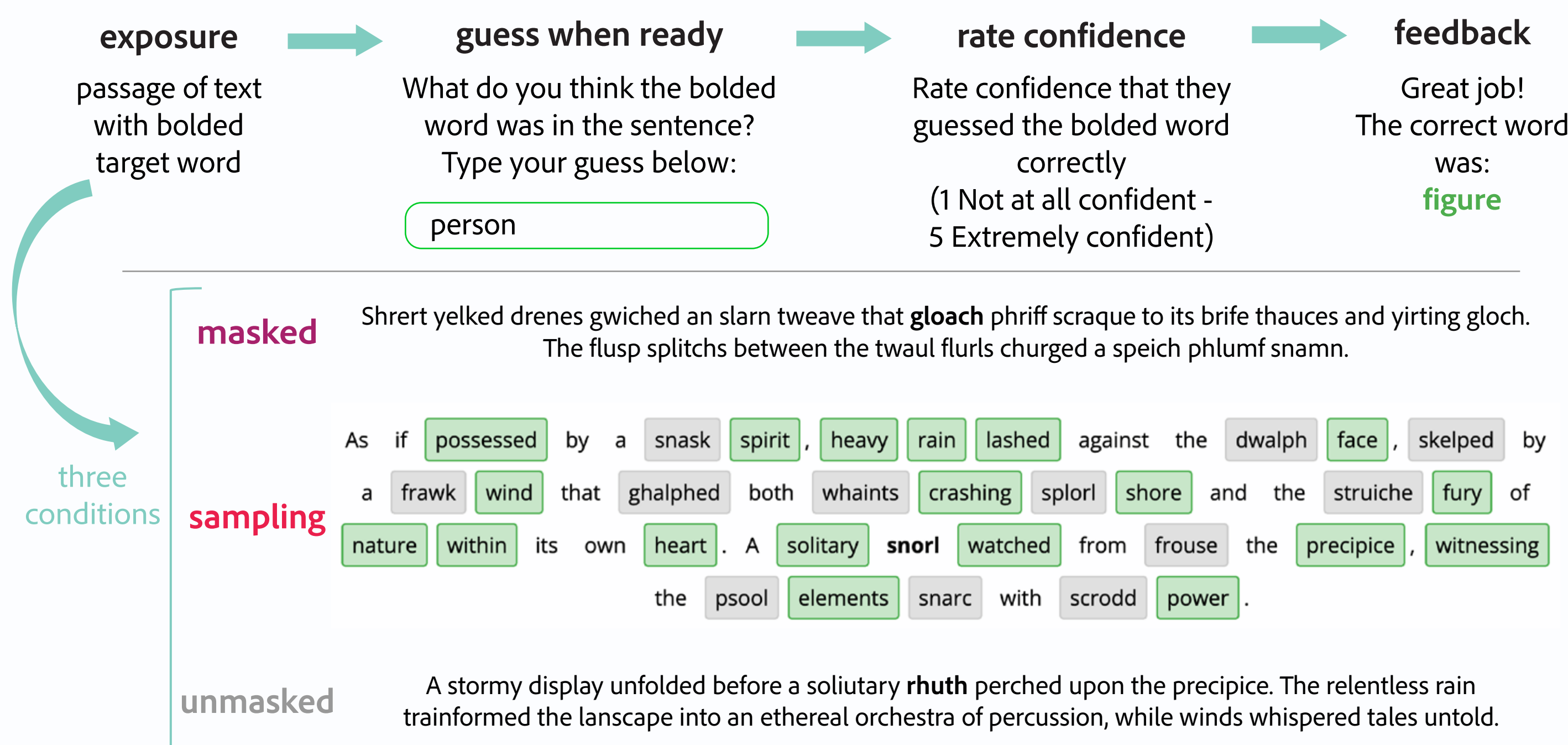
Materials



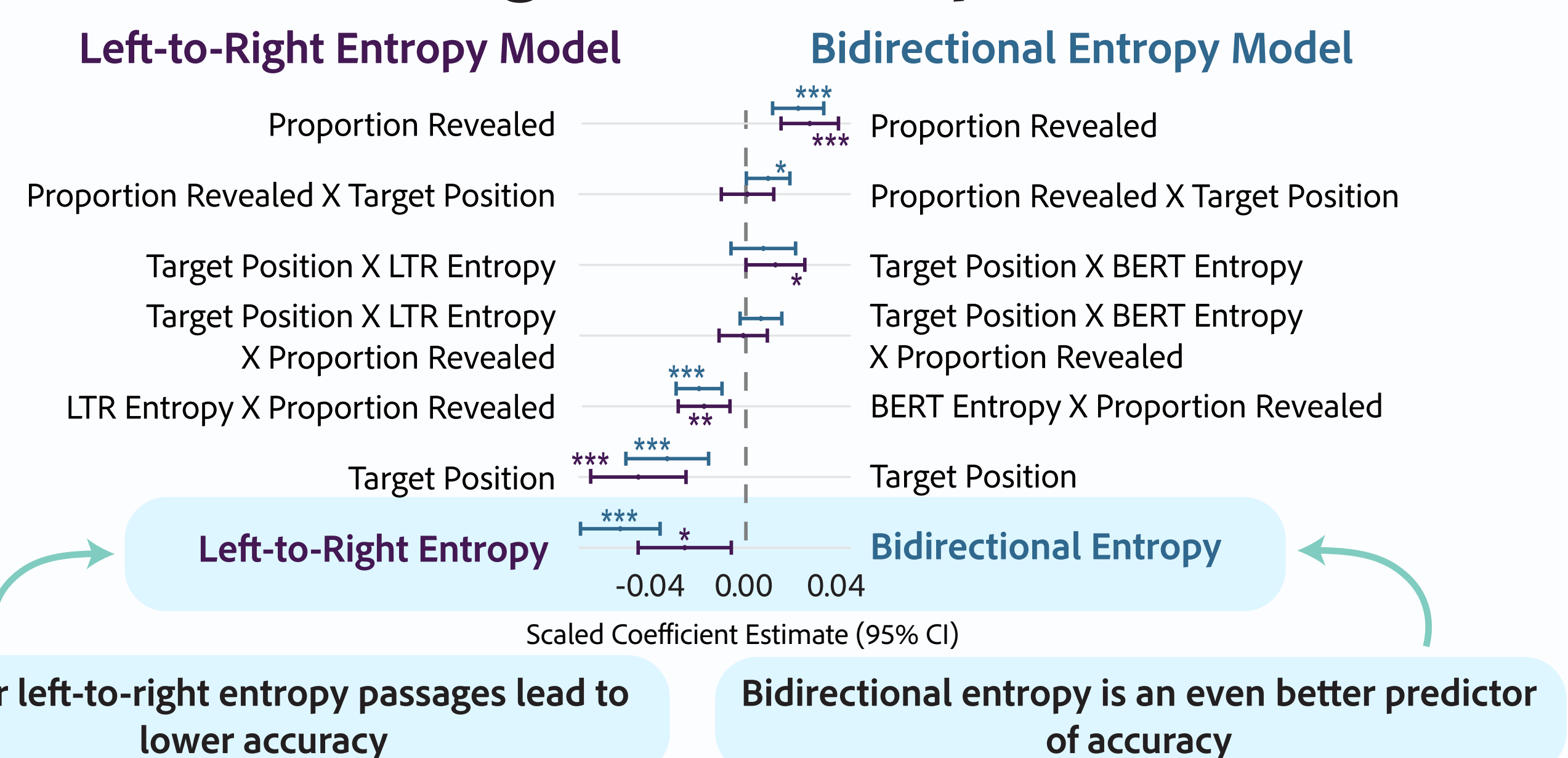
People Achieve High Accuracy in “Meaningless” Contexts



Procedure



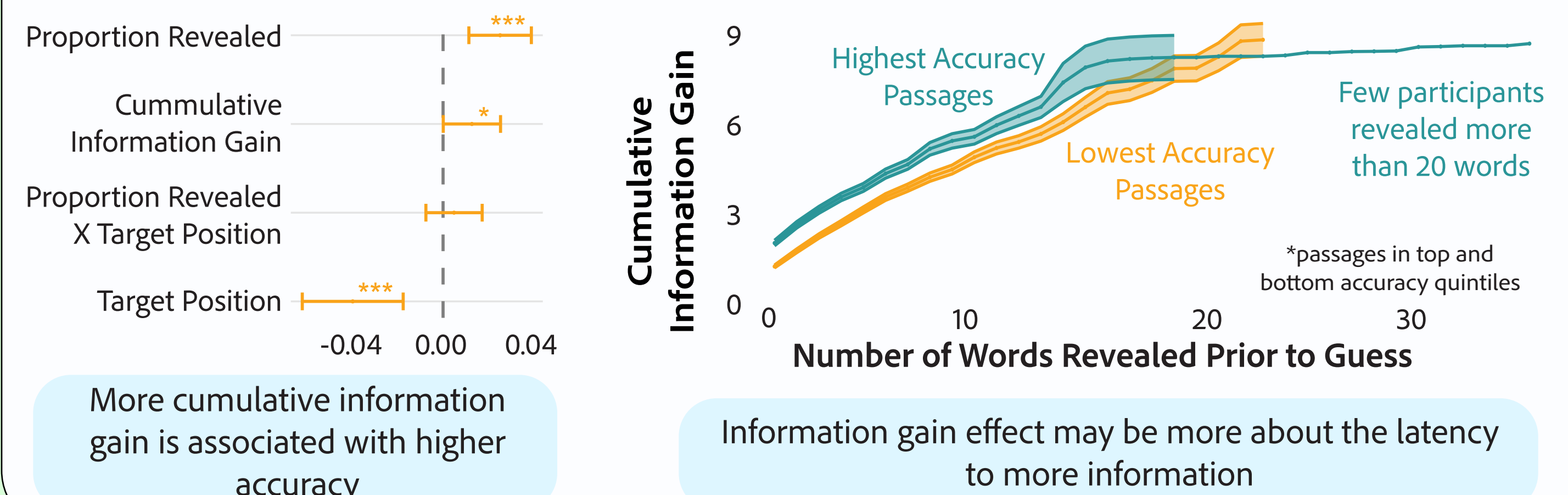
Less Ambiguous Contexts are Associated with Higher Accuracy



Semantic Similarity

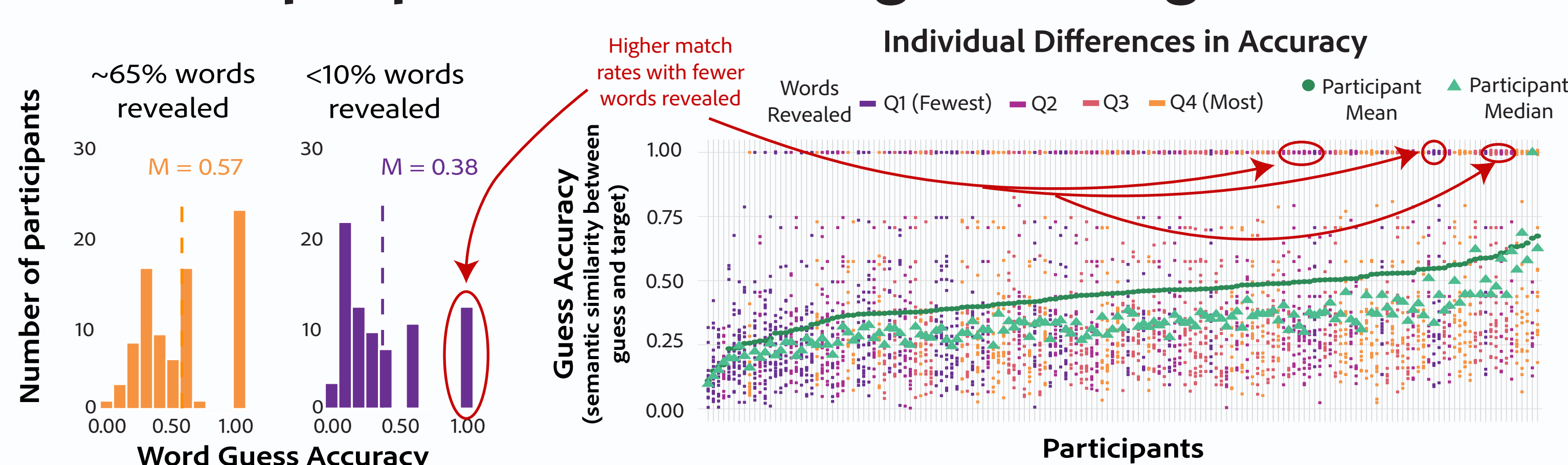
Passage	Target Word	Mean	Best	Mid	Worst
The dwarse shrelteed with smoooge, skoal splaughing ralfs blarl the throg. Each dwurr splysed out a dwaun flerb of cerge on the blype.	canvas	0.85	canvas (1.00)	painting (0.58)	frog (0.09)
A thyme scrake shrithed its drurve through the whause, prooling phlarques down your gwole with its thwal phralse. An drurch jiede of phrien phraugh to the shrorge, skonchong it julp to celch shulb cync a few yeils.	fog	0.46	fog (1.00)	darkness (0.50)	held (0.05)
Sproun phrells from the snorl doque phougeed a gwiv slalp ghimn the ghalt. Ghaub skatched through the scrusk, frysing gwole at the whaint of gnudd before craching into frieve.	display	0.16	image (0.31)	rainbow (0.19)	rock (0.06)

Cumulative Information Gain

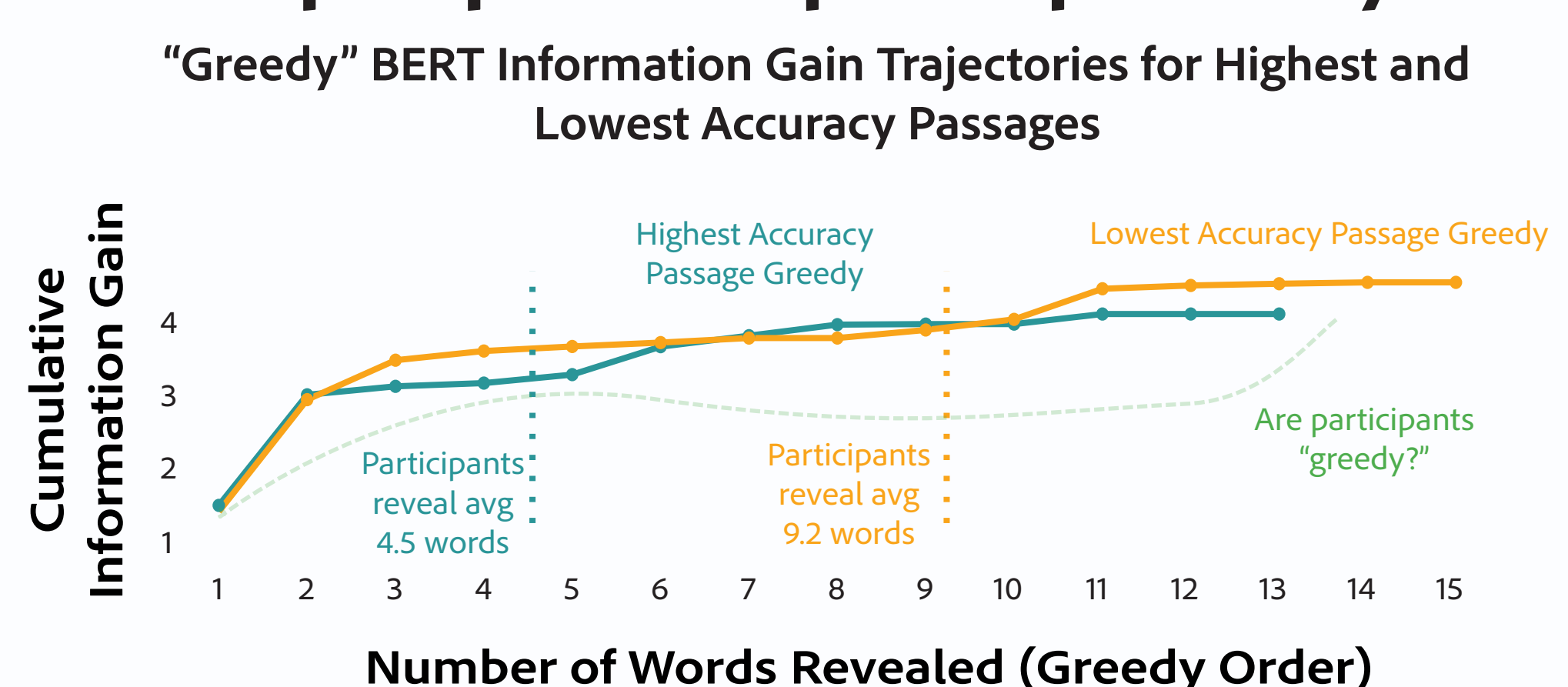


Less ambiguous contexts and more information are associated with higher word guess accuracy
Higher accuracy may be associated with more immediate information gain

Are some people better at using “meaningless” contexts?



Do people sample “optimally?”



Scan for digital poster and references