Awareness of speaker intentions affects expectations about upcoming content
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Comprehenders rely on real-world knowledge when guessing upcoming content. For example, *taking a sip from the <u>waterfall</u>* is more expected than *taking a sip from the <u>transmitter</u>* (Kutas & Hillyard 1980). Conversely, speakers tend to omit typical content in favour of newsworthy content: they include an optional instrument more often when it is atypical, favouring the production of *stab with <u>an ice pick</u>* over *stab with <u>a knife</u>* (Brown & Dell 1987). These findings are taken to reflect constraints on cooperative communication whereby speakers' contributions are expected to be appropriately informative and relevant (Grice 1975). Comprehenders' guesses about upcoming words thus appear to depend on (at least) two kinds of expectations - one about the real world (what situations are probable) and one about the speaker's goals (what content do we expect cooperative speakers to mention). Depending on comprehenders' sensitivity to the speaker's communicative intentions, comprehenders' estimates of whether a particular situation will be worth mentioning may vary. Here we elicit sentence completions via a Cloze task as an index of comprehenders' expectations about upcoming material (Taylor 1953). We manipulate the salience of the speaker and show that the more aware participants are of the speaker as an intentional communicator, the more informative they expect the speaker's contribution to be.

Design. In an online experiment, participants (N=400) were asked to complete sentences with the word or words that they expected next. Target items mention a specific location (20 targets), such as a train station. We varied the salience of the speaker in a between-participants design as shown in Figure 1: the **bare condition** only mentions the location; the **third person condition** invokes a speaker talking about someone at the location; the **first person condition** directly mentions the speaker; and the **visible speaker condition** uses first person and adds a photograph of a person speaking. In order to establish which objects are considered typical for each of these locations, we conducted an independent pre-test where participants (N=22) listed 10 objects that appear most plausibly in each location. An increase in informative completions across conditions is expected under an account in which anticipation depends on comprehenders' awareness of an intentional speaker behind the utterance - one whose contribution ought to be subject to the constraints of cooperative communication. We measure the informativity of participants' responses with three measures: variability of responses (entropy score per location to compare consistency vs unpredictability of responses), inclusion of modification (which may make otherwise typical content like a 'train' more newsworthy: 'steam train'; or negation to mark the absence of something typical: 'no train'), and typicality of objects mentioned (as compared to responses elicited in the pre-test).

Results. Table 1 shows that the visible speaker condition elicited the most variability (i.e., more unpredictability; higher entropy for visible speaker/first person/third person conditions than baseline bare and also visible speaker>first person; p<0.001 with paired Wilcoxon signed-rank tests). Moreover, the visible speaker condition elicited the highest modification rates and the highest use of negation (logistic regressions with RE location and participant; p<0.001; same pattern as entropy), and the lowest typicality (linear regression, p<0.001; same pattern). In sum, comprehenders expect more informative content the more aware they are of the speaker.

Discussion. The current experiment shows that guesses about upcoming words in a sentence-completion Cloze task are malleable, based not on changing features of the situation that the sentence describes but on changing emphasis on the speaker and, we assume, the comprehenders' awareness of the speaker as an intentional communicator who will use language to convey novel and interesting content. This finding is corroborated by studies showing that comprehenders are sensitive to speakers' preference to be informative

(Rohde, Futrell & Lucas 2021; Kravtchenko & Demberg 2015). Beyond the methodological point that Cloze task completions should not be treated as static measures of expectancy, the results highlight the importance of characterizing comprehenders' models of speakers and their communicative intentions in theories of expectation-driven processing.

Further investigation. A follow-up experiment will investigate whether this expectation for informativity is further malleable depending on properties of the speaker (Grodner & Sedivy 2011). Building on the same paradigm as the visible speaker condition from the current experiment, participants will be asked to complete sentences from two different speakers: one speaker who routinely makes uninformative utterances, and one who produces utterances that are highly informative. To implement this manipulation, we will expose participants to an initial observation phase for each of the speakers using responses given in the current experiment. The low-informativity speaker will use utterances with completions from the low-entropy condition (bare), while the high-informativity speaker will be shown with completions from the high-entropy condition (visible speaker). We predict that participants' continuations will have a lower mean entropy in the low-informativity speaker condition compared to the high one, reflecting a change in participants' evaluation of what counts as informative for each of the speakers. Similarly, use of modification will be lower and typical objects should be mentioned more frequently with the low-informativity speaker. Should these predictions be confirmed, this will lend further support to the argument that models of language processing needs to take into account comprehenders' informativity-driven reasoning about the speaker. This would then not be limited to awareness of there being a speaker in general, but also include comprehenders' experiences with particular speakers and their individual preferences for informativity.

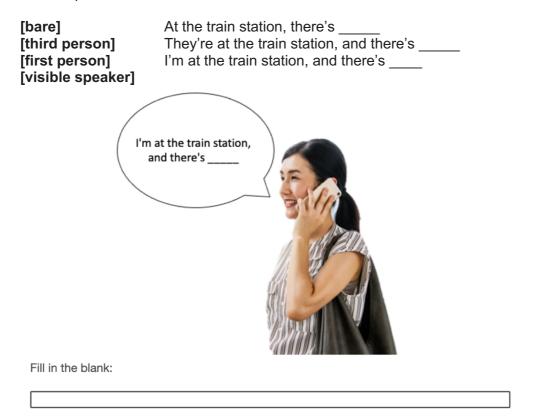**Figure 1**: Example trials for the train station location

[bare]   At the train station, there's _____
[third person]   They're at the train station, and there's _____
[first person]   I'm at the train station, and there's _____
[visible speaker]

I'm at the train station, and there's _____

Fill in the blank:

Table 1

	Visible speaker	First Person	Third Person	Bare
Entropy	4.06	3.30	3.33	3.00
Modification	0.64	0.30	0.25	0.13
Negation	0.21	0.07	0.04	0.01
Typicality	0.24	0.49	0.46	0.55

Table 1 Mean scores for entropy, use of modification and typicality of responses per condition. Entropy and modification were calculated over all the responses for any one location, and then a mean was calculated for each condition. Typicality means were calculated via an independent elicitation task, N=22.

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