Tracking multiple common grounds: Mismatches in activation

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The interpretation and use of referring expressions depends on whether they occur in direct discourse, (free) indirect discourse, or outside of speech report contexts. So far, the focus of studies on the semantics of reported speech (e.g. Maier, 2015) has been on indexical referring expressions like *I* and the observation that outside of direct speech reports, *I* refers to the narrator of the story, as in (1-a), and inside direct speech, it refers to the speaker in world of the story, e.g. Jane in (1-b).

(1) a. "Bill wants to sell the boat," I said.
b. "He is asking a fair price, I'm sure," Jane said.

In this paper we argue that since other kinds of referring expressions, for instance the 3d person pronoun *he* in (1-b), are also sensitive to who is speaking to whom and the content of their shared Common Ground (CG), that will affect the interpretation and use of such expressions in speech reports. In particular, Jane can only use the pronoun *he* to refer to Bill in (1-b) if she knows that Bill is already present and highly activated in the CG between her and her interlocutor (see e.g. Gundel et al., 1993).

In a fictional narrative, the reader usually has to keep track of multiple CGs. On the one hand, the participants of the dialogues in the world of the story share one or more CGs, e.g. Jane and I in (1). On the other hand, the narrator and the reader share a CG that is distinct from the CGs of the characters. If a referent is highly activated in the narrator-reader CG, it is not necessarily activated enough to grant the use of a 3d person pronoun in the characters' CG, and vice versa. The question is to what extent readers are able to track multiple CGs in fictional narrative. If there is a mismatch in the activation of a referent between the CGs, are readers sensitive to the activation in the characters' CG, the narrator-reader CG, or is there an interference between the conflicting activation patterns from different CGs?

We have devised an experiment in which we present texts like (2) to participants and ask them to choose a referring expression that fits better into the context (a name or a pronoun) in the **target** sentence.

(2)

opening	Jane pushed the plate of scones towards me.	
antecedent	" Bill wants to sell the boat," she said.	
intervening	**speech**	**thought**
	"Finally," I said, picking up the dropped napkin. "The old rust bucket nearly sank twice this year. And the repairs cost half a fortune. I've promised to never set foot in it again."	Finally, I thought, picking up the dropped napkin. The old rust bucket had nearly sunk twice this year. And the repairs had cost half a fortune. I had promised to never set foot in it again.
reactivation	**–**	**+**
	I poured milk into the cups and sat in front of Jane.	Bill was miffed and hadn't spoken to me since.
target	" [He/Bill] is asking a fair price, I'm sure," I said and rolled a warm scone between my cold hands.	

reactivation	intervening	separate CGs	narr/reader CG dominance	CG interference
–	speech	name	name	name
–	thought	pronoun	name	?
+	speech	name	pronoun	?
+	thought	pronoun	pronoun	pronoun

The text presents a fragment of a conversation between the 1st person narrator and another character (Jane, the interlocutor). The **opening** sentence introduces the interlocutor character. The following sentence introduces the **antecedent** (Bill) for the referring expression in the target sentence in the direct speech of the interlocutor. The target referent (Bill) and the interlocutor (Jane) always have distinct genders.

The purpose of the following sequence is to create distance between the antecedent and the target referring expression, so by the time the target sentence is interpreted, the activation of Bill decreases and the personal pronoun might no longer be the optimal choice to refer to him. In the **intervening speech** condition, that sequence constitutes the direct speech of the narrator, so the activation of Bill decreases both in the narrator-reader CG and in the CG of the narrator and Jane. In the **intervening thought** condition, the same sequence (with tenses adjusted accordingly) is presented as (free) indirect thought of the narrator. Jane does not hear these sentences, therefore, while Bill is being deactivated in the narrator-reader CG, he is not being deactivated (as much) in the characters' CG. For Jane, Bill is still the subject of the immediately preceding sentence when she interprets the speech in the target sentence.

The following sentence does not contain direct speech and therefore only exsists in the narrator-reader CG. In the **+reactivation** condition, that sentence reactivates Bill in the subject position; in the **–reactivation** condition, it does not, instead *I* is the subject. The combination of intervening speech with +reactivation creates the opposite kind of mismatch: now Bill is relatively deactivated in the characters' CG, but highly activated in the narrator-reader CG.

Our expectations for the preferred referring expressions are summarised in the table above. In the intervening thought +reactivation condition there is no mismatch, the target referent is highly activated in both CGs, so the pronoun should be the preferred choice in the target sentence. In the intervening speech –reactivation condition, where the referent is relatively deactivated in both CGs, the name should be, if not preferred, then relatively less dispreferred.

The mismatch conditions in the two middle lines of the table will reveal how readers manage conflicting CGs. If readers are able to keep track of the characters' CG as perfectly separate from the narrator-reader CG and always choose a referring expression intended for Jane's ears from Jane's standpoint, then we expect to find a main effect of the intervening speech/thought variable, and no effect of reactivation, because reactivation takes place in a sentence that does not affect Jane's representation of the context. On the other hand, if readers only pay attention to how activated referents are in their own representation, i.e. the activation pattern in the narrator-reader CG dominates over the characters' CGs, then we expect to see an effect of the reactivation variable, and no effect of the speech/thought variable, because no matter if the intervening sequence is presented as speech or thought, the distance to the antecedent is the same for the reader. Finally, if we find a main effect of both variables, this would be an indication that the conflicting activation patterns interfere in the reader's representation of the context and both influence the choice of referring expression to some extent.

The experiment is in its final preparation stage; the results will be presented at the workshop.

References: Gundel, Hedberg & Zacharski 1993. Cognitive status and the form of referring expressions in discourse. *Language* 69: 274–307. Maier 2015. Quotation and unquotation in free indirect discourse. *Mind & Language* 30: 345–373.