

Pronoun interpretation in German speech reports

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Abstract

We investigated the interpretation of German personal pronouns using a referent selection task. Participants read contexts introducing three characters followed by pictures depicting an utterance made by one referent. We manipulated the embedding of this utterance in either direct or indirect discourse and the inclusion of either a 1st, 2nd or 3rd person personal pronoun, leading to differences in the necessity to perform perspective shifts for correct interpretation. Referent selection data for pronouns show more errors in direct compared to indirect discourse, suggesting participants avoid perspective shifts. The 1st person pronoun shows a deviating pattern with more errors in indirect compared to direct discourse, in line with proposals highlighting the prominent perspective introduced by 1st person pronouns.

Keywords: pronoun interpretation, speech reports, direct discourse, indirect discourse

Introduction

Speech reports in direct discourse (DD; (1)) are verbatim quotes of what someone else said or thought (e.g., Davidson 1979). To correctly interpret the pronouns in (1), comprehenders must perform a perspective shift (shifting from the reporting speaker's to the reported speaker's perspective): The 1st person pronoun *I* refers to the reported speaker (*Peter*), the 2nd person pronoun *you* refers to the reporting speaker (the addressee of the utterance), and the 3rd person pronoun *he* refers to some other person. Indirect discourse (ID; (2)), by contrast, paraphrases what someone else has said or thought, without directly quoting them. For correct pronoun interpretation in (2), no perspective shift is necessary (i.e., interpretation from the reporting speaker's perspective): The 1st person pronoun *I* refers to the reporting speaker, the 2nd person pronoun *you* refers to the addressee in the current utterance context, and the 3rd person pronoun *he* refers to the reported speaker (*Peter*).

(1) Peter sagte: "Ich/Du/Er bringe/bringst/bringt Wein."

Peter said, "I/You/He will bring wine."

(2) Peter sagte, (dass) ich/du/er den Wein bringe/bringst/bringt.

Peter said (that) I/you/he will bring wine.

Köder et al. (2015) showed that Dutch speakers made more errors in identifying 2nd and 3rd person pronoun referents in DD compared to ID, whereas adequacy for 1st person pronouns in DD approximates that of ID.

This has been attributed to perspective shifts, which are necessary to correctly interpret pronouns in DD but not in ID. Based on the findings of Köder et al. (2015), we hypothesize to find higher error rates in DD compared to ID in our study on German. Furthermore, the error pattern for the 1st person pronoun might diverge from the 2nd and 3rd person pronouns.

Methodology

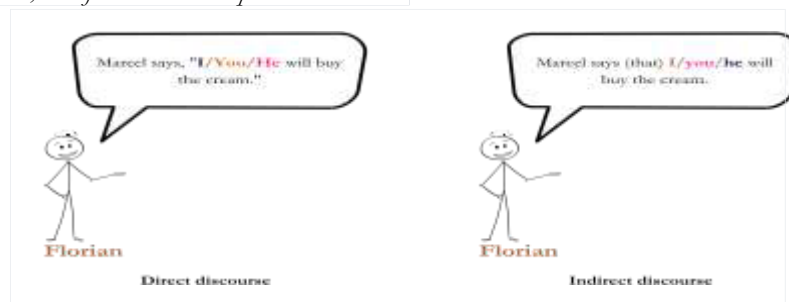
Participants

Ninety adult native speakers of German were recruited online via Prolific.

Materials and procedure

We created 24 experimental sets of written stimuli. An example is shown in (3). Each trial consisted of a context and a target picture. The context introduced two male referents in the first sentence who did something together (*Florian* and *Marcel* in (3a)). The second context sentence (3b) introduced a third male referent who joined the other two characters later (*Tim*). This referent then talked to the first referent. The context was followed by a depiction of the first character (presented as a stick figure with the respective proper name shown below) reporting what the second character said within a speech bubble. The speech bubble contained an utterance in DD or ID and contained a 1st, 2nd, or 3rd person pronoun (see (3c)). Following the context and the picture, participants continued to the next screen, where they were presented the prompt for the referent selection task. We asked participants who will perform the action mentioned in the speech bubble, giving them all three proper names as possible answers (three-alternative forced choice task). Materials were presented in German, we use translations in the pictures for reasons of space.

- (3) a. Am Montag haben sich Florian und Marcel im Drogeriemarkt getroffen, um eine neue Sonnencreme zu begutachten.
On Monday, Florian and Marcel met at the drugstore to check out a new sunscreen.
- b. Später kam Tim dazu und sprach mit Florian.
Later, Tim joined them and spoke with Florian.



Results

The proportion of (in)correct choices for each condition are shown in Figure 1. Overall, participants made more errors in DD (53.43%) than in ID (17.04%). The highest error rate was found for the 2nd person pronoun in DD (80.56%), whereas the lowest error rate was found for 3rd person pronouns in ID (3.6%). A generalized linear mixed effects logistic regression model (with a binary coding of wrong choice as dependent variable) revealed a significant interaction. There was a difference between speech reports for all three pronouns: Whereas more errors were made in DD compared to ID in case of the 2nd and 3rd person pronoun *you* and *he* (*you*: z ratio: 17.333, $p < .001$, *he*: z ratio: 14.446, $p < .001$), more errors in ID compared to DD were made for the 1st person pronoun *I* (z ratio: -8.310, $p < .001$).

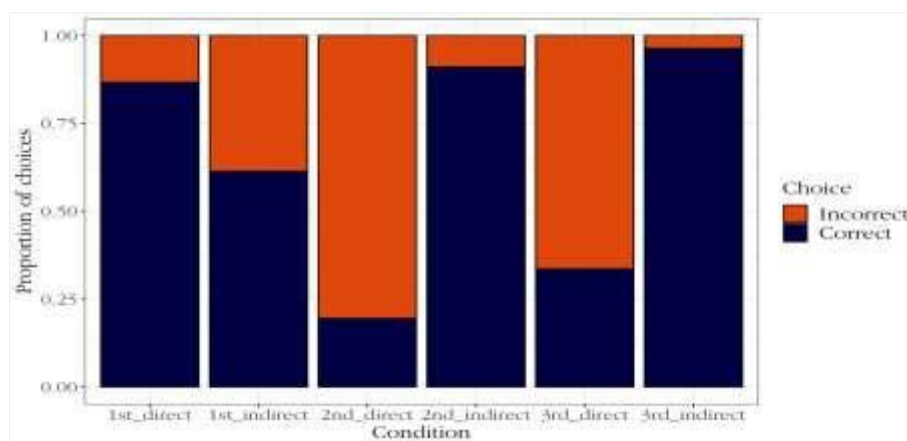


Figure 1. Proportion of incorrect (orange) and correct (blue) choices.

Discussion

The results confirm the overall pattern found by Köder et al. (2015) for Dutch. The main difference between their and our results is that in our study, participants performed significantly worse in the referent selection task for 1st person pronouns in ID compared to DD. In their study, by contrast, participants performed equally well in selecting the correct referent of the 1st person pronoun in DD and ID alike. Comprehenders seem to avoid perspective shifts, explaining the worse performance in DD for 2nd and 3rd person pronouns.

This interpretation is strengthened when looking at the type of wrong choices: for 2nd person pronouns, participants overwhelmingly chose the third referent, i.e., the addressee in the reporting context. For 3rd person pronouns, participants chose the second referent in most trials, i.e., neither speaker nor

addressee in the reporting context. 1st person pronouns deviate from this pattern. However, introducing a perspective by means of a 1st person pronoun makes this perspective more salient (Saure et al. 2023). Thus, the reported speaker's perspective is salient, pressuring participants to perform a perspective shift toward that speaker (= referent 2 in contexts), resulting in correct referent choices in most trials. This line of reasoning can also account for the ID condition: in the 2nd and 3rd person pronoun conditions, participants chose correctly because no perspective shift was needed. For 1st person pronouns, participants made more mistakes by wrongly performing a perspective shift toward the reported speaker. This wrong shift might be due to syntactic factors as the reported speech type conditions (= embedded sentence in ID vs. quote in DD) were syntactically similar, as the embedded clause in ID was introduced without a complementizer and in verb-second word order. The effect should thus be weaker when introducing the embedded clause in the ID condition by means of the complementizer *dass* ('that'), resulting in a verb-final structure. This might account for differences between this study and Köder et al. (2015) as Dutch only allows for ID to occur when introduced by a complementizer + verb-final word order (leaving aside methodological differences for now).

To conclude, direct discourse seems to be more demanding than indirect discourse in language comprehension. Future research should take into account the role of different syntactic structures (ID) as well as the processing of speech reports (e.g., on-line measurements, memory representations). Moreover, in a next step, it is worth investigating the effect speech-accompanying gestures have on the interpretation of pronouns in speech reports, as they have been argued to be cues of perspective shift (cf. Harris & Potts 2011).

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