

## The interaction of semantic bias and topic status in the interpretation of personal and demonstrative pronouns in German

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P(ersonal)-pronouns exhibit a subject preference which is easily overridden by semantic bias (verb semantics, coherence relations). Anaphoric d(emonstrative)-pronouns, in contrast, have been hy-pothesized to show a preference for non-topical antecedents. To what extent semantic bias affects d-pronouns is not known ([3]; [6]; [2]). We therefore ran two experiments investigating how topi-cality and semantic bias affect the interpretation of p- and d-pronouns.

Each experimental stimulus of Experiment 1 consisted of three sentences followed by a continuation prompt (see Table 1). Sentence 1 set the scene. Sentence 2 introduced a referent that was taken up in sentence 3, which additionally introduced a second referent and contained an object-experiencer verb. The referent newly introduced in sentence 3 acted as subject/stimulus and was non-topical. The referent already introduced in sentence 2 served as object/experiencer and was the topic ([5]; [1]). Each continuation prompt contained a pronoun (*er* 'he'/p-pronoun or *der* 'he'/d-pronoun) and a discourse marker (*deshalb* 'therefore' or *nämlich* 'the reason was that').

In accordance with the literature, the results for the p-pronoun show a preference for the stimulus with a cause relation and a preference for the experiencer with a consequence relation (see Figure 1). Unlike most prior experiments, which have found complementary preferences for p- and d-pronouns, the d-pronoun showed the very same preferences. Thus, semantic bias governs the interpretation of p- and d-pronouns in the same way ([2]).

Experiment 2 manipulated the position of the topic in sentence 3 by varying the referent introduced in sentence 2. The continuation prompt always contained the causal discourse marker *nämlich*. When the subject referent of sentence 3 was already introduced in sentence 2, the topic appeared in first position, whereas the topic appeared in final position when the object referent was already introduced before. For the p-pronoun, the results show a strong preference to refer to the subject/stimulus, independent of the topic's position (see Figure 1). The d-pronoun also preferred reference to the first NP, but the strength of the preference was modulated by the topic manipulation. The preference for the subject/stimulus was much stronger when it was not the topic, in agreement with the non-topic orientation of d-pronouns.

In sum, the interpretation of p-pronouns was almost completely determined by the coherence relation established by the discourse marker. Thus, with a strong semantic bias, topicality is too weak to have an effect. Like p-pronouns, d-pronouns showed a preference for the semantically most expected antecedent. Simultaneously, the d-pronoun showed an anti-topic effect, as proposed in the literature.

A theory integrating different types of bias proposed in [4] derives interpretive preferences from production frequencies. For both experiments we have obtained these frequencies in order to test this theory.

Table 1: A complete stimulus item for Experiment 1

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[C1] Gestern Abend wurde eine Talkshow für das Fernsehen aufgezeichnet.  
yesterday evening was a talkshow for the TV recorded

[C2] In der Runde saß auch ein angesehener Experte.  
in the round sat also a distinguished expert

[C3] Ein vorlauter Studiogast hat den Experten während der Aufzeichnung mehrfach irritiert.  
a cheeky studio guest has the expert during the recording several times irritated.

Continuation prompt: **Er/Der** \_\_\_\_\_ nämlich (cause) \_\_\_\_\_  
**Er/Der** \_\_\_\_\_ deshalb (consequence) \_\_\_\_\_

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Table 2: A complete stimulus item for Experiment 2

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[C1] Gestern Abend wurde eine Talkshow für das Fernsehen aufgezeichnet.  
yesterday evening was a talkshow for the TV recorded

**Topic First**

[C2] In der Runde saß auch ein vorlauter Studiogast.  
in the round sat also a cheeky studio guest

[C3] Der Studiogast hat einen angesehenen Experten während der Aufzeichnung mehrfach irritiert.  
the studio guest has a distinguished expert during the recording several times irritated.

**Topic Second**

[C2] In der Runde saß auch ein angesehener Experte.  
in the round sat also a distinguished expert

[C3] Ein vorlauter Studiogast hat den Experten während der Aufzeichnung mehrfach irritiert.  
a cheeky studio guest has the expert during the recording several times irritated.

Continuation prompt: **Er/Der** \_\_\_\_\_ nämlich (cause) \_\_\_\_\_

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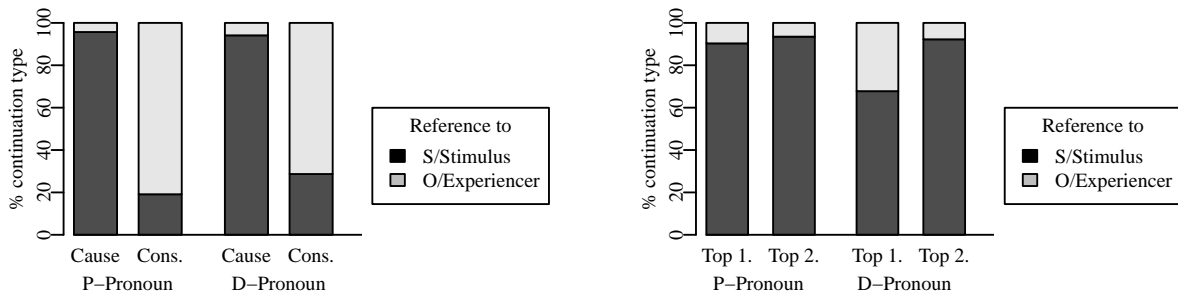


Figure 1: References to the sub./stimulus and obj./experiencer for Experiments 1 (left) and 2 (right).

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