Demonstrative Pronouns as Pointing Devices
and how they support attention management in discourse*

Peter Bosch
pbosch@uos.de

Linguistic processing, like any cognitive activity, needs to manage the limited resources available: This includes **attention management**.

- Human languages have evolved to support this task: By making available a variety of linguistic forms that distinguish between objects of reference according to the degree to which they are objects of attention.
- Syntax universally distinguishes between more or less salient objects, roughly according to the following scale:

  Subject > Direct Object > Indirect Object > Other

  i.e., the referents of subject expressions tend to be more salient than the referents of direct objects, etc.

- Referential expressions, such as Noun Phrases of various kinds, including different types of pronouns, are sensitive to the salience of their referents: Typically the shortest and simplest salient referents, while demonstrative pronouns prefer subject antecedents & demonstrative pronouns (der, die, das, ...) prefer less salient referents.

This leads to a general hypothesis for German pronouns:

**Personal pronouns (er, sie, es, ...) prefer highly salient referents, while demonstrative pronouns (der, die, das, ...) prefer less salient referents.**

When these referents have already been mentioned in a preceding utterance, their syntactic salience marking becomes relevant and we may derive the specific hypothesis that

**Personal pronouns prefer subject antecedents & demonstratives prefer non-subject antecedents.**

Intuitions about meaning support this hypothesis. In (1a) the more plausible interpretation is that Hans is sick, in (1b) it's rather Franz who is said to be sick.

(1a) **Hans** wollte Franz besuchen. Aber **er** war krank.
(1b) **Hans** wollte **Franz** besuchen. Aber **der** war krank.

When common sense plausibility interferes with linguistic preference, as in (2b), the utterance may sound weird in suggesting the doctor’s sickness as a reason for Hans to visit him.

(2a) **Hans** mußte den Arzt aufsuchen. **Denn** er war krank.
(2b) **Hans** mußte den **Arzt** aufsuchen. **Denn der** war krank.

The weirdness of (2b) could not arise if the demonstrative **der** did not have a preference for the less salient referent, i.e., the referent of the preceding object expression, as its interpretation.

The hypotheses are also supported by quantitative data from a corpus study, cf. Figure 1 (Bosch et al. 2003) and by data from a reading time study (Bosch et al. to app.).

The results in Figure 1, however, also indicate that the **distribution of personal and demonstrative pronouns is not complementary:**

The preference of personal pronouns for subjects is stronger than the preference of demonstratives for non-subject antecedents. This shows that demonstratives may, under specific circumstances, also refer to highly salient referents, as in (3), where they re-emphasise the saliency of their referent.

(3) **Hans** wollte seine Ruhe haben. **Der** will immer nur seine Ruhe haben.

Both functions of demonstratives, their drawing attention to less salient referents and their re-emphasising for referents that are salient already, naturally fit together when we view demonstratives as pointing devices.

**Demonstrative pronouns are pointing devices:**

- They either move referents that are not salient into the focus of attention, or
- They re-emphasise the focal status of a referent, in contrast to any potential competitors.

Quantitative corpus data (Figure 2) support this idea: Preverbal syntactic positions that are regular focus positions are indeed the preferred positions of demonstratives.

Further experimental work will have to investigate the extent to which the predictions of the current hypothesis accord with non-linguistic parameters of attention.

**References:**


Bosch, Peter, Graham Katz & Carla Umbach (to app.) The Non-Subject Bias of German Demonstrative Pronouns. in: Monika Schwarz-Friesel, Manfred Consten & Mareile Knees (eds.): Anaphors in Texts (2007)

* Much of the work reported here was done together with Carla Umbach, Graham Katz, Philip Cummins, Boris Gutbod, Tom Rozzarro, and Yufan Zhao./Poster date: 04 Feb 2007

---

Sascha Alexejenko, M.A.
Maria Cieschinger, B.Sc.
Judith Degen, B.Sc.
Presley Ifukor, B.A.
Philip Rauter, M.A.
Bettina Schneider, Dipl. Ling.

Prof. Dr. Peter Bosch
Prof. Dr. Stefan Evert
Dr. Carla Umbach
Cornelia Endris, Dipl. Ling.

http://www.cogsci.uni-osnabrueck.de/~CL/

---

Institute of Cognitive Science
University of Osnabrück