

Pro or Contra?

Persuasion in the Potsdam Commentary Corpus

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Abstract. This short paper describes our ongoing work on representing the argument structure of a particular class of persuasive texts, and on reading experiments designed to investigate the effects of certain rhetorical devices, in particular the use of explicit argumentative connectives.

1 INTRODUCTION

The first version of the Potsdam Commentary Corpus (Stede 2004) assembled 170 short texts from a German regional daily paper, which comment upon contemporary local developments. More recently, we added a set of 50 texts of a much more explicitly argumentative nature. These are taken from the Berlin-based paper *Tagesspiegel*, which every Sunday under the heading “Pro and Contra” publishes two short opinion pieces dealing with the same topic (of either local or nation-wide significance), with one arguing for and the other against the proposal, respectively.² Topics under discussion include whether parents should have their children vaccinated; whether Berlin should apply for the next Olympic Games; or whether some particular museum ought to be refurbished.

Consisting typically of 12-14 sentences, these pieces have to clearly make their point and provide arguments in favour of the proposition in a concise way. Nonetheless, the clear majority of these articles also mention potential counter-arguments, which are then dismissed. Thus, the argumentative structure of these articles is not overly complicated, but not trivial, either.

This short paper describes the current stage of our work with these texts: Our representation of argument structure, along with a technical annotation framework (Sect. 2); a pilot study for investigating how readers perceive the persuasion in these texts (Sect. 3); and plans for experiments that study the specific effects of linguistic devices such as argumentative connectives (Sect. 4).

2 ARGUMENT REPRESENTATION AND ANNOTATION

The first phase of our work with the Pro & Contra texts aimed at identifying a framework suitable for describing the underlying

arguments. We settled on the approach of Freeman (1993), who – in a nutshell – suggested a “decomposed” version of Toulmin’s (1958) scheme, which allows for building representations of arguments in a piecemeal fashion. We made some minor modifications to Freeman’s notation; a sample analysis of one of our texts, together with a discussion of the relationship between the structure of the argument and the linear ordering of the corresponding elements in the text, can be found in (Stede and Sauer mann 2008).

The general framework of study in the Potsdam Commentary Corpus is that of *multi-level annotation*: We attach linguistic information to the texts on various levels of description (e.g., sentence syntax, coreference, rhetorical structure) in order to study the interplay of these levels and their relevance for more complicated levels of description (e.g., information structure). This approach to discourse annotation is documented in (Stede 2008). The technical infrastructure supporting it, including a standoff XML representation format as well as various software tools for performing, retrieving, visualising, and merging annotations are described in (Chiarcos et al. 2008).

Right now, we are working on the integration of the level of argument structure into this framework. We use the CmapTools³ for drawing argument trees, and we developed a converter that maps the XML output of CmapTools to our “pivot” standoff XML format, so that the argument annotations can in turn be related to other levels of annotation in our linguistic database ANNIS. The idea is to systematically explore how the role that different portions of text play in the argumentative structure (central thesis, supporting fact, rebuttal, counter-rebuttal) are related to features of linguistic realization.

3 PILOT STUDY: WHICH TEXTS ARE CONVINCING?

As a preparatory step for experiments on the perception of persuasive elements, we conducted a pilot study to identify texts from our corpus that readers would a) understand; b) with reliable agreement identify the central thesis of the text; and c) regard as well-written and “convincingly argued”.

We aimed at excluding effects of reader’s pre-conceptions or prejudices and thus first selected a set of texts that cover topics which we expected our readers (Linguistics students) not to be emotionally attached to. We thus excluded texts whose topics

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² A similar pair of articles is published by the American paper *USA Today* under the heading “our view / opposing view”.

³ <http://cmap.ihmc.us>

were under public debate at the time of our study, or which are expected to be of general prominence for a student audience. At the same time, we wanted to be sure that the content of the texts was not too difficult or confusing, and hence we excluded some texts whose topic was rather idiosyncratic or relevant only to a small portion of readers of the newspaper.

Six texts meeting our criteria were given to three readers each. After subjects had read the texts, we collected them and asked the participants to fill in a short questionnaire. They were asked to judge the texts for general comprehensibility and clarity of the argument. Also, we asked the readers to recall the “central statement” of the text (which in our argument representation would correspond to the root of the tree), as well as arguments given in favour of the central statement and those against it (if any).

For two texts, the results were rather discouraging: readers gave somewhat different accounts of the central statement and also the intersection of pro- and con-arguments was low. Four texts, on the other hand, lead to good agreement. This partitioning of our six texts is now taken as the basis for our planned experiments, as described below.

4 CURRENT WORK: EXPERIMENTS ON PERSUASION

Building on the pilot study, we are currently preparing experiments aiming at finding out why the “bad” texts are being perceived in rather different ways, while the “good” texts seem to work quite well in the sense that there is a relatively uniform response by readers. Our working hypothesis is that the Freeman-type representation with its support relationships between individual statements represents the gist of the text and thereby the content that can be kept constant while changing the linguistic presentation of the argument. We thus produce variants of the texts that still adhere to the underlying argument structure but differ along two dimensions: (i) linear order and (ii) use of explicit argumentative signals. As for (i), the idea is to present arguments, rebuttals and counter-rebuttals in different orderings and check whether we can find effects in perceived persuasiveness. As for (ii), we are intrigued by a recent study by Kamalski et al. (2008), who investigated whether the use of subjective markers (especially connectives) in argumentative text has a positive or a negative effect on persuasiveness. In a nutshell, working with Dutch texts they found that presenting the argument in a more “objective” fashion tends to lead to a greater degree of persuasion. We plan to study the same phenomenon with our German texts, employing variation both in connectives (there is a difference between argumentative connectives such as *denn* and “objective-causal” ones such as *weil*; similar to English *because* versus *for*) and in modal particles and modal verbs that signal the illocutionary status of a statement – whether it is presented as a hypothesis, a fact, an appeal, and the like.

Besides, in collaboration with the psycholinguistics group in our department, we are now preparing EKP studies with shortened versions of our texts, which are also being varied along the dimensions described above. The issue is whether effects normally observed in EKP experiments for “semantically

anomalous” sentences can also be found with “pragmatic surprises”, e.g. an argumentative text that seems to lead to a particular conclusion, but then presents a pragmatically less compatible statement at the end of the text.

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