Evelyn Gius, Irakli Khvedelidze, Mareike Schumacher & Inna Uglanova, **“Automated annotation of indicators for potential conflicts as step towards automatic crisis detection in narratives”**

Abstract: This paper examines how the automatic annotation of conflict potential in narrative texts reveals the flexibility of narratives as intelligent systems (Mateas 2003). The aim is to use computational modeling techniques to make the basic conflict patterns as well as their variations in the corpus observable. For this purpose, we highlight the possibility of automatic crisis detection in narrative texts and show first results of automatic annotation. The approach is based on the assumption that the latent conflicts contained in a literary text can be identified by certain text features. Moreover, we assume that an accumulation of these conflict markers indicates a realized conflict. Accordingly, we operationalize the conflictuality of a text on the basis of certain signals in the vocabulary and thus first analyze the conflict potential of the text, in order to then follow up with further investigations on the realized conflicts.

We distinguish four categories that are particularly relevant to literary conflict: explicit indicators of conflict potential, implicit indicators of conflict (such as the mention of a "dagger"), indicators of conflict resolution (such as "intercession" or "understanding"), and indicators of conflict intensity (such as in the phrase "they fell sharply upon her"). The category of explicit indicators of conflict potential can be further specified by differentiating between emotion-based conflict indicators ("he was indignant"), state-based conflict indicators ("in this lamentable world"), action-based conflict indicators ("they locked him up"), and indicators of internal conflict ("in vain he pondered rescue").

The conflict markers conceptualized in this way are strongly vocabulary-based; nevertheless, their identification is not based on word lists, but must be context-sensitive to achieve good results. This combination of vocabulary orientation and context dependency makes the detection and annotation of conflict markers methodologically similar to Named Entity Recognition (cf. Schumacher 2018). In order to automatically annotate and classify indicators of potential conflicts in narrative texts, we trained a classifier based on conditional random field algorithms (cf. Sutton and McCullum 2011). A series of experiments conducted using a small training and test corpus consisting of narrative texts ranging from the late 18th to the early 20th century serves as a proof of concept. The training corpus comprises 10 novellas of the 19th. From each novella, a final passage amounting to 4,000 tokens was extracted and transferred to the training corpus. Tests and analysis were conducted on five narrative texts including *The Metamorphosis* by Kafka and *Effi Briest* by Fontane.

Evelyn Gius is a professor for Digital Philology and Modern German Literature at the Technical University of Darmstadt. She has been working in the field of Digital Humanities for more than 15 years. In her PhD project, she developed an annotation-based approach to the narrative structure of conflict narratives. Currently she is the PI of the dissemination project forTEXT, the annotation platform CATMA and the computational literary studies project EvENT (Evaluating Events in Narrative Theory). She also is part of the programme committee of the DFG priority programme Computational Literary Studies, vice chairwoman of the Digital Humanities association DHd and editor of the new book series *Digitale Literaturwissenschaft* as well as of the open access *Journal for Computational LIterary Studies*. Her research topics include manual and automatic annotation of literary texts, Narratology, and corpus-based Digital Literary Studies.

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