

Operationalizing and Measuring Conflict in German Novels

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Abstract

In this contribution we explore ways of detecting conflict representation in literary texts. First, we operationalize Glasl's concept of social conflict for manual annotation and second, we adapt a word embedding-based sentiment analysis (*SentiArt*) for the attribution of conflict values based on two scalar conflict operationalizations. By translating the values of the latter approaches into binary labels, we compare the embedding approaches with the manual annotation. Though correlation between the approaches is low, the paper demonstrates possible approaches to conflict analysis in literary texts and outlines directions for future research.

Keywords

Computational Literary Studies, conflict, German prose, manual annotation, word embedding

1. Introduction

Conflicts are a core phenomenon in literary texts. Their presence or absence is, for example, considered constitutive for notions of genre as in the Aristotelian drama, they are the background for the formation of literary epochs, as societal conflicts in Naturalist texts, and theories on the development of plot are based on them. The computational identification of conflicts would thus enable the identification of the most frequent or typical conflicts in narratives from various literatures, epochs, genres, or authors as well as a variety of other analyses. Nevertheless, while conflict is prevalent in digital approaches in social sciences and beyond,¹ it has received only limited attention in computational literary studies so far.²

In this contribution we explore some first steps toward conflict detection based on the representation of conflict on the textual surface of literary texts. We present two ways of identifying conflict in a corpus of novels from the German Romantic, Realist and Naturalist period. For the manual annotation approach (cf. section 2), we annotate a key element of social conflict.


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¹Cf. [11] for a recent overview.

²Among the studies explicitly addressing conflict, [21] explore conflict with a focus on character interaction models by Propp and Greimas, [12] develops a propositional calculus for detecting genre-specific character constellations in Greek tragedy and the narratological study [6] analyses the relation between the representation of a narrative and its conflictuality.

By addressing incompatibility as part of a notion of social conflict, we model incompatibility at sentence level. In contrast, the word embedding approaches (cf. section 3) are supposed to tackle conflict more generally. For these, we first use and then adapt word embedding model-based sentiment analysis for the attribution of conflict values to our corpus. For the adaptation to conflict we use the poles of conflict and harmony and, in a second operationalization, the poles of conflict and resolution for assigning conflict values at the word level. Even though both the manual and the word embedding approaches to conflict are focused on the—more or less explicit—presence of conflict in the text, they differ with regard to the way they operationalize conflict. We therefore compare the approaches with regard to similarities and differences, also including the sentiment analysis (cf. section 4). Finally we discuss our findings and the next steps for developing a more comprehensive approach to conflict in literary narratives (cf. section 5).

2. Manual Annotation of Social Conflict

2.1. Conflict as Incompatibility

Our first exploration is based on a operationalization of social conflict. We use the notion by Friedrich Glasl [9] who synthesizes various previous definitions by defining social conflict as an interaction between two agents ('Aktoren', i.e. individuals, groups, organisations, etc.), where at least one agent experiences an incompatibility in perceiving, thinking/imagining, feeling, and wanting with the other agent. Furthermore, this incompatibility prevents the realization of what the agent thinks, feels, or wants.³

In terms of definition this means that compatibility and impairment are the two necessary conditions in Glasl's notion. Together they form the sufficient condition for the presence of a social conflict. For the exploration presented in this contribution we focus on the first condition: incompatibility. We assume that the different kinds of experiencing listed by Glasl (perceiving, thinking/imagining, feeling, and wanting) as well as the experienced incompatibility are explicated in the literary text. Moreover, we assume that these can be detected on sentence level. Since literary texts tend to be less explicit than real live narratives, we define two kinds of incompatibility that can be realized in a text: Firstly, as the narration of an experience of a character as contrary to someone else's experience and secondly, as the representation of an experience as something negative. For both cases we differentiate between actual incompatibility and hypothetical incompatible experience (e.g., when a character states that they would experience something incompatible if something specific happened).

With this, we have a first operationalization of one core aspect of Glasl's notion of social conflict. In further studies, it will be connected to the second condition, the resulting impairment.

³For a formalization of Glasl's notion of social conflict for literary studies based on category theory cf. [5].

2.2. Annotation Process

The manual annotation process of represented incompatibility is based on sentences.⁴ For each sentence, annotators are also given some context that can be used for resolving ambiguities or uncertainties in the sentence in question. The following two conditions have to be true for a sentence to be annotated as incompatibility:

1. Experiencing:
A character is narrated as experiencing something in perceiving, thinking/imagining, feeling, or wanting (by self-statement or narrator's description)
2. Incompatibility:
The experiencing of this something is depicted as somehow contrary to how another character experiences this something *OR* The experiencing of this something is (represented as) negative

Furthermore, the type of incompatibility is specified:

- Is the experience tied to something that is a fact (→ actual incompatibility) or that is portrayed as possible (→ hypothetical incompatibility)?

Here are some examples for incompatibilities. An actual incompatibility based on contrary experience can be found in this sentence: "Because you don't know what it is to love a man, - to have to love a man, - how that burns!" (Felix Dahn (1886): *Fredigundis*, our translation). Here, a character states that they know how to feel something (i.e. pain caused by loving a man) that the addressed character does not know how to feel. The following is an actual incompatibility based on an experience represented as something negative: "With the awakening also my malice awoke, which increased still violently, when I heard from over there the mocking words and the laughter of my opponent, who on the other side, a little more mildly than me, might have come to earth." (Johann Wolfgang Goethe (1811): *Aus meinem Leben. Dichtung und Wahrheit*, our translation). In this sentence, the first person narrator perceives themselves as being malicious, which is a negative feeling.

And finally an example for hypothetical incompatibility: "»No, my father is and will remain your and your husband's faithful friend.« »Well,« said Mrs. Ebermann, »I would feel a cessation of his interest in us painfully, but a reproach would not arise from it in my heart.«" (Ida Boy-Ed: (1892) *Empor*, our translation). The second speaker (Mrs. Ebermann) states that she would perceive it painfully (i.e., negatively), if the other character's father would lose interest in them.

In contrast to the cases exemplified by these sentences and in line with Glasl's notion, descriptions of (static) character traits, combat or other types of physical action caused by (presumed) anger as well as external proscriptions without any subjective perception (e.g., laws, bans, etc.) are not considered incompatibilities.

⁴This is a brief overview of our annotation guideline. The full guidelines can be found in Appendix A.

2.3. Annotation Task

Based on these principles, we developed a guideline (cf. Appendix A). Two annotators annotated 1,000 random sentences from our corpora.⁵ Both annotators are trained in literary studies, annotator 1 is a student of literary studies and annotator 2 the first author. The annotated categories are depicted in Table 1.

Table 1

Distribution of categories in the annotated sample.

	actual incompatibility	hypothetical incompatibility	no incompatibility	total
annotator 1	145	20	835	1,000
annotator 2	68	9	923	1,000

While the inter-annotator agreement of 0.325 Cohen’s *kappa* is comparably low, the findings in the creation of the gold standard point to possible clarifications for future annotations. The annotators agree on 50 out of the 165 sentences annotated by annotator 1 (including six cases with disagreement about actual and hypothetical incompatibility). Furthermore, 30 sentences that are only annotated by annotator 1 as well as 27 sentences only annotated by annotator 2 were added to the gold standard. These are cases that seem to have been overlooked by the respective annotator. The remaining 85 annotations of annotator 1 are not included (11 out of these are errors, 44 contain no personal experience and 30 contain some sort of implied incompatibility but are not explicit enough to fit the current guidelines).

3. A Word Embedding Approach to Conflict Detection

3.1. Adapting the *SentiArt* Approach for Conflicts

For our second approach to detecting conflict, we adapt the word embedding-based sentiment analysis of the *SentiArt*-toolbox [13] to conflict analysis and test three implementations.

According to the distributional hypothesis [4], word embedding models encode semantic similarity based on word use. In sentiment analysis, the advantage of word embeddings over lexicon-based sentiment analysis is that we are not limited to the specific words with sentiment values in a sentiment lexicon. Instead, we are able to express semantic similarity in a numerical value which can be calculated for every word in a text. The *SentiArt* method allows choosing sentiment label words and thus focusing on specific words. The original approach uses emotion label words based on Ekman’s concept of basic emotions [3] to calculate valence and arousal values. However, that the algorithmic selection of emotion labels from other sources can be a viable alternative for sentiment analysis [1].

In our approach, for evaluating a possible relevance of sentiment for conflict analysis, we first implement the *SentiArt*-approach for sentiment. For the sentiment labels, we translated the label words from an emotion model based on James Russel’s ‘Circumplex Model of Affect’ [19].⁶ We then encoded the conflict dimensions in analogous way by building our model on

⁵For the Romanticism corpus cf. [20]. The Naturalism and Realism corpora are subsets of [7], as used in [8]. For more details cf. Appendix D.

⁶We used a simplified model by [15].

the most representative words for a conflict spectrum.

The second word embedding approach focuses on conflict by using the the poles of conflict and harmony. The label words for these are selected from the Dornseiff-dictionary [2]. The Dornseiff-dictionary covers a wide range of topics and organizes subjects into specific subgroups, providing a list of related terms for each. Connections between these subgroups are also listed and terms can pertain to multiple subgroups. We use words in the thematic groups of ‘conflict’ to encode the upper end of the spectrum and words in ‘harmony’-related groups for the lower end of the spectrum.

The third word embedding approach also focuses on conflict. This time, the scale ranges from conflict to conflict resolution and label word selection is based on a prior annotation study of conflict in German-language short stories. This task aimed at annotating various markers of social conflict potential, such as indicators of emotion-, action- or condition-based conflict as well as indicators for conflict resolution. Based on the average ratings from all annotators, we assessed for each annotated word how well it represented either the tags for conflict or the specific tag for conflict resolution. The most representative words were selected as label words for conflict and conflict resolution.

3.2. Implementation

For our analysis we first trained two *Word2Vec*-models [16] using the *Gensim* implementation [18]. One model is trained for the entire Romantic period-corpus (115 novels) and the second on the Realism and Naturalism corpora which cover the same time span (in total 102 novels). By training two models, we aim to account for diachronic changes in word meanings, given the differences between Romantic and Realist/Naturalist texts in terms of their publication dates. We selected the parameters following the best practice determined in [1] (among other parameters, a vector size of 300, a window of 5 and 10 epochs) without setting a minimum word frequency because we want to calculate sentiment and conflict values for all words in the corpus. We used the sentence splitter and lemmatizer in *Stanza* [17], removed punctuation and lowercased the text.⁷ The calculation of the value for a target word is based on the cosine similarity between the target word and all label words. The average of the similarities between target word and negative labels is subtracted from the average for the positive labels. For all three label word groups (sentiment, conflict vs. harmony and conflict vs. resolution), we filter out those that are not present in all subcorpora. An overview over the final label lists can be found in Table 2. We then calculate valence, arousal, and both types of conflict values for all types in each corpus and calculate average values for each sentence.

3.3. Preliminary Findings: Conflict in German Novels

With the sentiment and conflict values, analyses of the most/least conflictual novel or trends in a corpus become possible. While the outcomes need further inspection, we can see that, for example, there is an increase in the conflict values of both approaches during the Romantic

⁷For a previous iteration of this method cf. [10]. There, we calculated values for verb phrases. For evaluation reasons we now use whole sentences, as verb phrases were often too short for allowing annotation decisions.

Table 2

Translated label words for the sentiment and the two conflict approaches (for the German label words cf. Appendix B).

high arousal	high valence	high conflict (conflict vs. harmony)	high conflict (conflict vs. resolution)
angry, tense, excited, delighted	delighted, happy, content, relaxed	to kill, misfortune, danger, fear, fright, quarrel, fight, to torment, revenge, violence, weapon, protection	apprehensive, fearful, cruel, rifle, to clench, to stab, knife, to smash, to obey, to scold
low arousal	low valence	low conflict (conflict vs. harmony)	low conflict (conflict vs. resolution)
relaxed, calm, tired, bored	bored, depressed, frustrated, angry	happiness, light, pleasure, to admire, beauty, peace	to comfort, rich, to reassure, to win, back, to ask, easy

period (cf. Figure 2).⁸ This aligns with the assumption in literary studies that conflicts increase in the Romantic period (cf., for example, [14, p. 53]).

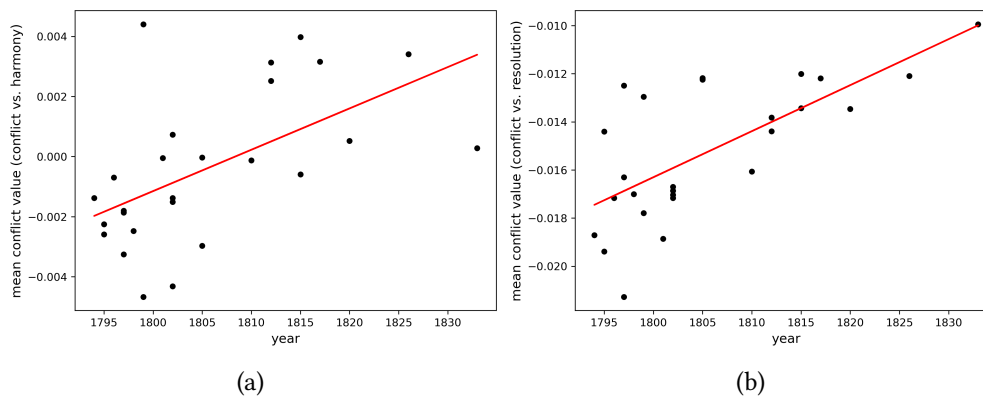


Figure 1: Mean conflict values for Romanticism core corpus (a) conflict vs. harmony (b) conflict vs. resolution.

Furthermore, examining specific novels can, among other, provide insights on the development of conflictuality, coincidences of conflict value with key conflicts in the plot or correlations between sentiment and conflict. For example, in Schlegel's *Lucinde* (cf. Figure 2), we see that lower valence, i.e. negativity, correlates with conflict. The Pearson correlation between conflict value and valence amounts to $p=-0.85$, or $p=0.85$, if the valence values are reversed as in Figure 2. The correlation between conflict values and arousal, on the other hand, is only $p=-0.42$.

⁸Cf. Appendix C for additional outcomes.

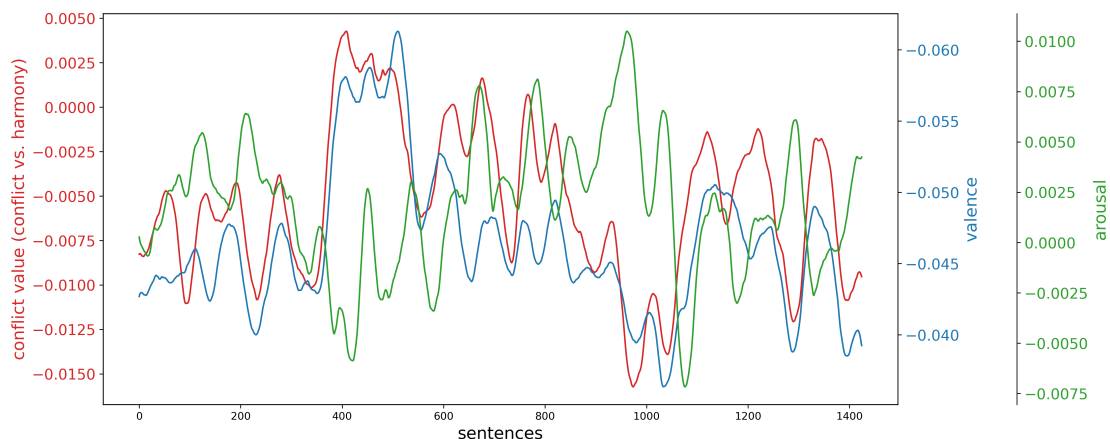


Figure 2: Conflict vs. harmony, valence, and arousal for Friedrich Schlegel’s *Lucinde* (smoothed in bins of 50 sentences). To highlight potential parallels between high conflict and negative valence, x-values for valence are reversed.

4. Comparing the Approaches

Part of our research interest is exploring whether the manual annotation of incompatibility and the word embedding approaches relate to similar phenomena. While the manual annotation approach operationalizes conflict as incompatibility in social interaction, the embedding approaches implement conflict as scale from conflict to harmony respectively conflict resolution. Nevertheless, since all approaches address conflict, it is interesting to see if they are connected in some way. Therefore, we explore some possible comparisons in this section.

For now, we focus on the conflict vs. harmony-approach as the label words represent two distinct poles and examine the sample of 1,000 sentences, where incompatibility was annotated manually. Since we use binary labels (conflict/no conflict) for manual annotation and scalar values for the word embedding approach we transform the latter into binary labels by defining threshold values.

Since a sentence is similar to the concept of ‘conflict’ or ‘harmony’ if it has a positive or negative value, respectively, we set the threshold to zero. This results in 577 sentences with conflict (i.e., a positive value) and 423 sentences without conflict (i.e, a value below zero, cf. Table 3). If we compare these to the 107 sentences that were manually annotated as containing actual or hypothetical conflictual incompatibility and 893 sentences that contained none we get a precision value of 0.11, a recall of 0.61, and an F1-score of 0.19.

For a second comparison, we evaluate whether comparably high conflict values correlate with the manual incompatibility annotation. Therefore, we set the threshold at the upper quartile of the conflict values of the entire corpus, assuming that sentences with high conflict values also contain represented incompatibility. This results in 255 sentences above the upper quartile (value of 0.0089) and 745 sentences below the threshold, resulting in a precision of 0.11, a recall of 0.25 and an F1-score of 0.15 (cf. Table 4).⁹

⁹The comparison with the other word embedding approach with the poles conflict and conflict resolution demonstrated a similar overlap (F1-score of 0.19 if the threshold is set at zero as well and 0.11 with the upper quartile as

Table 3

Gold standard incompatibility annotation and binary labels conflict vs. harmony (threshold=0).

		binary labels conflict vs. harmony (threshold=0)	
		1	0
manual incompatibility annotation	1	65	42
	0	512	381

Table 4

Gold standard incompatibility annotation and binary labels conflict vs. harmony (threshold=Q3).

		binary labels conflict vs. harmony (threshold=Q3)	
		1	0
manual incompatibility annotation	1	27	80
	0	228	665

Analogously to the comparison of conflict vs. harmony-values, we now compare valence and arousal values with the incompatibility annotations. In order to select the high and negative values respectively, we use all sentences with valence values lower than the lower quartile and arousal values higher than the upper quartile. This yields low overlap with a recall of 0.26 for low valence and 0.27 for high arousal (cf. Table 5 and Table 6).

Table 5

Gold standard incompatibility annotation and binary labels valence (threshold=Q1).

		binary valence labels (threshold=Q1)	
		1	0
manual incompatibility annotation	1	28	79
	0	185	708

Table 6

Gold standard incompatibility annotation and binary labels arousal (threshold=Q3).

		binary arousal labels (threshold=Q3)	
		1	0
manual incompatibility annotation	1	29	78
	0	235	658

In comparing the automatic conflict annotation labels with the sentiment labels we make the same observation as in section 3 of high conflict correlating rather with low valence than high arousal. The comparison of the more conflictual sentences (threshold=Q3) and the sentences with lower valence (threshold=Q1) yields an F1 of 0.43 and with higher arousal (threshold=Q3) of 0.25 (cf. Table 7 and Table 8).

Table 7

Binary labels conflict vs. harmony and binary labels valence (threshold=Q3/Q1).

		binary labels valence (threshold=Q1)	
		1	0
binary labels conflict vs. harmony (threshold=Q3)	1	101	154
	0	112	633

Table 8

Binary labels conflict vs. harmony and binary labels arousal (threshold=Q3).

		binary labels arousal (threshold=Q3)	
		1	0
binary labels conflict vs. harmony (threshold=Q3)	1	64	191
	0	200	545

threshold).

5. Discussion

We have presented two possibilities of approaching conflict in literary texts. The first possibility focuses on incompatibility represented by the text. This is a necessary condition for social conflict and can thus be considered an indicator for conflict. We implemented the approach as a manual annotation procedure. The second possibility was implemented by using a word embedding-approach with conflict-specific label words. We adapted the approach of *SentiArt* for a sentiment analysis as well as for two conflict analyses. For the latter, conflict label words were chosen from a comprehensive lexicon and from annotated data from another study.

Regarding manual annotation, our agreement evaluation and error analyses show that the operationalization of incompatibility needs refinement for tackling the currently unclear cases. These cases range from descriptions of circumstances that could be interpreted as personal experience to cases where a difference in level of knowledge could be interpreted as a marker of conflictuality. Further elaborations of the annotation task could define more clearly which explicit and, if any, implicit expressions of incompatibility shall be annotated. A subsequent important step will be to take more elements from Glasl's definition into account, especially by defining impairment. With better agreement scores, the annotated data set can be used for machine learning.

For the word embedding approaches further evaluations would be interesting. Generally, our comparisons can also be seen as an attempt for better understanding word embedding approaches and improving their validity. For now, the presented comparison to the manual annotation yielded rather low F1-scores. This may indicate that the phenomena measured by the different approaches do not really correlate. Furthermore, for the conflict vs. harmony-approach different threshold-settings may make a difference: While the precision between zero or the upper quartile was nearly the same, setting the threshold at zero resulted in higher recall. These outcomes may be due to the different conflict notions connected to the approaches but other reasons are also possible. We therefore consider a further exploration of possible connections between the approaches fruitful. This includes a more in-depth examination of the heuristic potential (e.g. by looking at what happens in larger passages with high conflict values, cf. the conflict arc in Figure 2) as well as developing additional strategies for transferring the scalar values to binary values and checking for resulting differences in correlations.

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A. Annotation Guidelines for Conflictual Incompatibility

A.1. Introduction

The following guidelines implement an aspect of Glasl’s definition of social conflict, namely incompatibility. Goal is to identify situations of incompatibility depicted in a narration that are/could likely be a prerequisite for social conflict. The goal of the annotation is not to annotate Glasl’s notion of social conflict in its entirety.

A.2. Annotation Span

The annotation span are sentences. Sentence splitting was done automatically. The following guidelines have to be applicable to at least one phenomenon in the sentence for the sentence to be tagged accordingly. One sentence before and after are given only as auxiliary context, annotated are no phenomena expressed over multiple sentences.

Note: Annotation span is the automatically split sentence. Errors by the sentence splitter do not have to be corrected, e.g. if a sentence contains direct speech by multiple characters (recognizable by guillemets («»)) the annotation guidelines can be applied to the entire sentence (cf. examples from Dahn’s *Fredigundis* below).

A.3. Actual and Hypothetical Conflictual Incompatibility

A sentence contains conflictual incompatibility if both of the following two **necessary conditions** are true:

1. **Is someone represented as experiencing something in perceiving, thinking/imagining, feeling, or wanting (by self-statement or narrator's description)?**
2. **Is the experiencing of this something represented as somehow contrary to how someone else experiences this something?**

OR

Is the experiencing of this (represented as) something represented as negative?

Furthermore, the following question constitutes the type of incompatibility:

3. **Is the experience tied to something that is a fact or that is portrayed as possible?**
→ **actual or hypothetical incompatibility**¹⁰

Please note: There are only rare cases where a text addresses incompatibility in one of the versions mentioned above in an explicit manner. Instead, in most cases the decision about the presence of a compatibility involves some interpretation of the text. Nevertheless, this interpretation should be strongly related to the text.

Examples for actual incompatibility:

The experience regards something that is actually happening or has actually happened.

- “Mit dem Erwachen erwachte auch meine Bosheit, die sich noch heftig vermehrte, als ich von drüben die Spottworte und das Gelächter meiner Gegnerin vernahm, die an der andern Seite, etwas gelinder als ich, mochte zur Erde gekommen sein.” (Johann Wolfgang Goethe (1811): *Aus meinem Leben. Dichtung und Wahrheit*) → The first person narrator perceives to be mean, which is typically a negative feeling, in the following sentence the character also attacks somebody.
- “Gleichgültig brach sie mit mir – und das war der Bruch meines Lebens!” (*prior sentence*), “Ich mochte nichts mehr von ihr hören;” (*target sentence*), “ich sandte ihr das Letzte, was ich von ihr besaß, die Börse, durch den Grafen Malariva zurück.” (*following sentence*) (Heinrich Zschokke (1844): *Die Rose von Disentis*) → The first person narrator want's not to be associated with someone anymore, breaking off contact as a negatively connoted desire.
- “»Weil du nicht weißt, was es ist, einen Mann lieben, – einen Mann lieben müssen, – wie das brennt!« »Nein!« lachte die andre, das Haar lustig schüttelnd.«” (Felix Dahn (1886): *Fredigundis*) → The speaker states that they know how to feel something (pain caused by loving a man) that the addressed person does not know how to feel (and even confirms it).

¹⁰If a sentence contains multiple phenomena (actual and hypothetical incompatibility), the dominant phenomenon should be assigned as tag.

Examples for hypothetical incompatibility

The experience regards something that is only possible.

- “Nein, mein Vater ist und bleibt dein und deines Mannes treuer Freund.« »Nun,« sagte Frau Ebermann, »ich würde ein Aufhören seines Interesses an uns schmerzlich empfinden, aber ein Vorwurf würde ihm in meinem Herzen nicht daraus erwachsen.“ (Ida Boy-Ed (1892): *Empor*) → The second speaker (Frau Ebermann) states, that she would perceive it painfully (i.e., negatively), if the other character’s father would lose interest in them.

A.4. Negative Examples

- What does **not** count as (relevant/proper) **experience**?
 - Mere **statements without** any hint towards an **experience** and an **experiencing subject**.
 - * “Sich absondern von der Menge, verräth wenig Muth.” (Karl Bleibtreu (1888): *Größenwahn*) → There is no information about the origin of this statement.
 - Descriptions of (static) **character traits** → e.g. looks, state of mind, even if stereotypically negative
 - * “Er ist mein Lieblingsdichter, und ich kann ihn auswendig, so wenig ich mir sonst, trotz gelegentlich eigener Versündigungen, aus der Dichterei mache.” (Theodor Fontane (1895): *Effi Briest*) → The character does not like poetry, not liking poetry can be seen here as static character trait.
 - **Combat** or **physical actions** caused by (presumed) anger
 - * “Der Fürst wandte sich ab.” (Joseph von Eichendorff (1833): *Dichter und ihre Gesellen*) → Could only be result of a conflictual situation, no explicit expression of the character experiencing something.
 - Mere **facial expressions**.
 - * “»Was kommt Euch denn zu von den Marken?« sprach der Graf von Anhalt, der gar finster vor sich blickte.” (Willibald Alexis (1842): *Der falsche Woldemar*) → The character’s (Graf von Anhalt) facial expression does not explicitly match a mental experience and is rather a conflict indicator, than an expression of proper incompatibility.
- What does **not** count as (relevant) **cause for incompatibility**?
 - External proscriptions (laws, bans, etc.), where the incompatibility does not stem from a subjective perception
 - * “Mir ist es bisher versagt geblieben, irgend welchen Einfluß auf das junge Mädchen auszuüben.” (Wilhelm von Polenz (1893): *Der Pfarrer von Breitendorf*) → The character first does not express that they want to influence this person and the incompatibility (of presumed want to influence a person) is second not of

internal nature (like e.g. the character stating that they are angry about not being allowed to influence this other person).

B. Label Lists German

Table 9

Label words for the sentiment and each conflict approach in German.

high arousal	high valence	high conflict (conflict vs. harmony)	high conflict (conflict vs. resolution)
zornig, nervös, aufgeregt, entzückt	entzückt, glücklich, zufrieden, gelassen	töten, unglück, gefahr, furcht, schrecken, streit, kampf, quälen, rache, gewalt, waffe, schutz	bedenklich, ängstlich, grausam, gewehr, ballen, stechen, messer, einschlagen, gehorchen, schelten
low arousal	low valence	low conflict (conflict vs. harmony)	low conflict (conflict vs. resolution)
gelassen, ruhig, müde, überdrüssig	überdrüssig, bedrückt, bekümmert, zornig	glück, leicht, lust, bewundern, schönheit, friede	trösten, reich, beruhigen, gewinnen, rücken, bitten, leicht

C. Mean Conflict Values for Realism and Naturalism Corpus

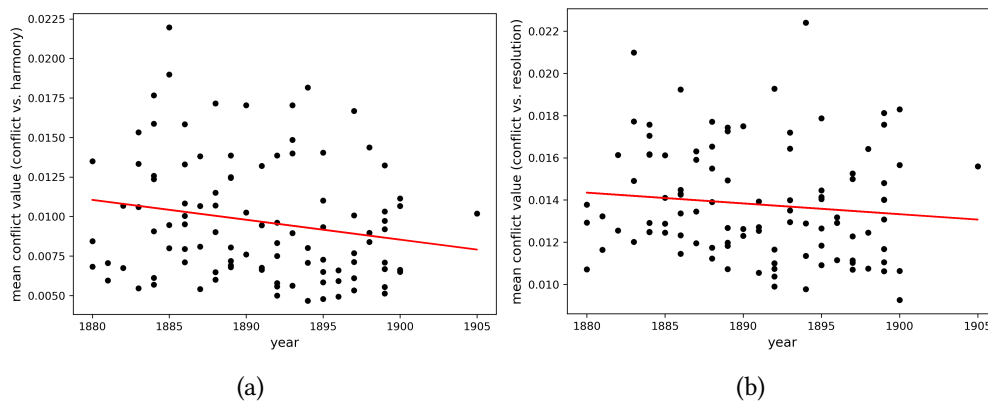


Figure 3: Mean conflict values for Realism and Naturalism corpus (a) conflict vs. harmony-approach (b) conflict vs. resolution-approach.

D. Online Resources

Cf. https://github.com/forTEXT/conflict_in_german_prose.