

INTRODUCTION & MOTIVATION

FWO-Project: “Evaluation of literature by professional and layperson critics. A digital and literary sociological analysis of evaluative talk of literature through the prism of literary prizes (2007-2017)”¹

- Professional and layperson literary criticism surrounding the *Ingeborg-Bachmann-Preis* and the *Tage der deutschsprachigen Literatur* (TDDL)
- Gain insight in the literary evaluative criteria & the differences in evaluation practices across platforms and media
- Goal:
 - Construct literary value through evaluative diction (ABSA)
 - Describe the preliminary conditions for training model
 - Automatic ABSA by tackling three different subtasks



EXPERIMENTS

Experimental corpus:

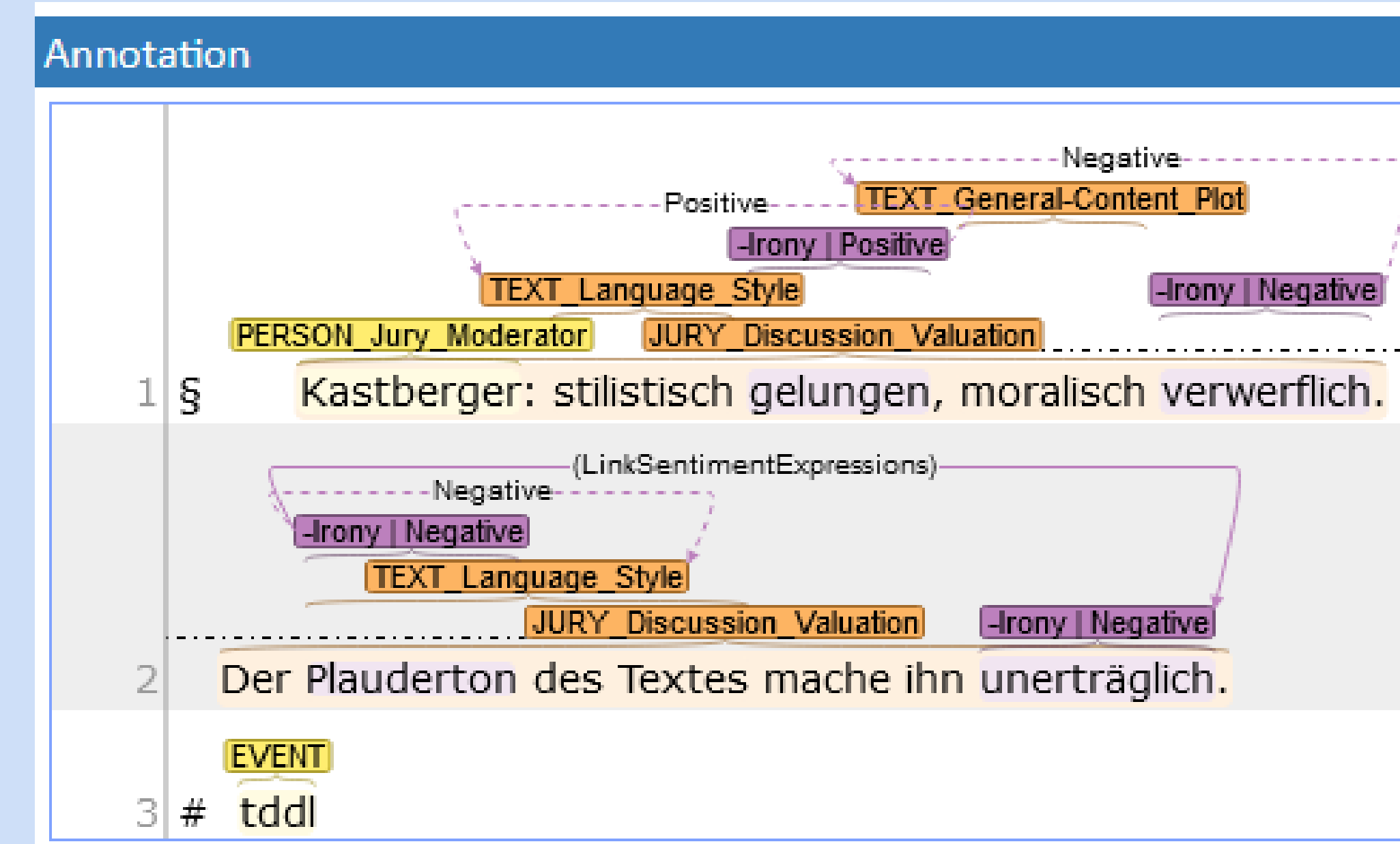
557 German tweets collected with TDDL-related hashtags, e.g. #tddl, #tddl19, #bachmannpreis...

Task:

- Pre-trained German BERT² fine-tuned directly for downstream tasks, Aspect Category Classification and Aspect Sentiment Analysis
- 80% training data, 20% to determine the accuracy
- ABSA subtasks:
 - Aspect detection
 - Aspect category classification
 - Aspect sentiment analysis
- 2 Polarity approaches:
 1. Using aspect embeddings only
 2. Using an additional context window of 5 adjoining words in either direction

Results:

CORPUS ANNOTATION & ANALYSIS: Annotation stats & examples



Method: Aspect-Based Sentiment Analysis (ABSA)

Three Layers:

1. Aspects or Feature Expressions (FE):
 - 7 main categories: “Text”, “Reading”, “Contender”, “Jury”, “Onsite Audience”, “Meta” & “Allo-References”
 - 53 subcategories: E.g. “Characters”, “Form”, “General”, “General Content or Plot”, “Language or Style”, “Point of View or Narration”...
2. Named Entities (NE): “Event”, “Organisation”, “Person” & “Product”
3. Polarity or Sentiment Expressions (SE): “positive”, “neutral”, “negative”

Aspect Category Classification – CLASSIFIER: Neural Net

	Precision	Recall	F1-score	Support
Allo-References	1,00	0,50	0,67	4
Meta	0,86	0,91	0,88	76
Reading	0,89	0,75	0,81	32
Contender	0,68	0,70	0,69	33
Text	0,85	0,91	0,88	43
Jury	0,63	0,79	0,70	24
Onsite Audience	0,73	0,62	0,67	13
Accuracy			0,81	236
Macro avg	0,81	0,73	0,76	236
Weighted avg	0,81	0,81	0,80	236

Polarity Detection – CLASSIFIER: AdaBoost (Aspect Embeddings)

	Precision	Recall	F1-score	Support
Negative	0,67	0,67	0,67	64
Positive	0,59	0,59	0,59	51
Accuracy			0,63	115
Macro avg	0,63	0,63	0,63	115
Weighted avg	0,63	0,63	0,63	115

Polarity Detection – CLASSIFIER: AdaBoost (Context Window)

	Precision	Recall	F1-score	Support
Negative	0,74	0,77	0,75	64
Positive	0,69	0,67	0,68	51
Accuracy			0,72	115
Macro avg	0,72	0,72	0,72	115
Weighted avg	0,72	0,72	0,72	115

CONCLUSION & FUTURE WORK

Conclusion:

- Aspect detection = very challenging due to:
 - String length
 - Presence of multiple aspects per sentence
- Aspect category classification: scores are low for under-represented categories
- Aspect sentiment analysis: implicitness, irony, proximity...

Tweet	Annotated Polarity	Predicted Polarity
Die Gefangenschaft in der (fiktiven) Vorstellung, also Fucking Kayfabe und dessen Verführungs-Kraft! Tolle Rede von Clemens J. Setz zur tddl-Eröffnung. (Nun aber weiter mit der Online-Abstinenz)	Positive	Negative
Heute um 10 Uhr gucke ich das erste Mal in meinem Leben bei den #TDDL rein. Katharina Schultens liest einen Text , dessen Genese ich beiwohnen durfte und ich freue mich , dass ihn nun die ganze Welt hören wird	Positive	Negative
#tddl Erste Lesung. Künftige Welt - radikal gedacht. Brutal und poetisch zugleich. pic.twitter.com/f3BFdmWgyE	Positive	Negative
Ich fang erst mal mit Essen an, das ist mir gerade echt zu nervig nach 2 Std Schlaf #tddl	Negative	Positive

Future work:

- Look into specific pre-trained models for social media
- Take lexicon info (built from corpus) into account
- Expand experimental corpus

Footnotes:

¹ <https://www.talklitmining.ugent.be/>

² <https://huggingface.co/bert-base-german-cased>

