

- This study is carried out in the framework of the **BMBF-funded** project **Rez@Kultur**.
- Aim: the analysis of online reviews of **cultural artefacts** = books, works of art, art exhibitions:
 1. components
 2. structure
 3. **reception** process
 4. **production** process
 5. conditions influencing these **processes**

• Current RESEARCH GOAL:

– Extraction of textual evidence for **cultural education processes**:

1. Marotzki 1990:

* ⇒ processes where the conception which an individual has of himself or herself, and/or his/her conception of others and of the world around them undergo a change

2. Reinwand-Weiß 2012:

* ⇒ processes take place in the subjects themselves, when they decide, because of their interests, to get involved with an artefact

– Examples:

1. “[...] und dieses Buch **hat mir die Augen geöffnet**“ (“[...] and this book was **an eye-opener for me**“) ⇒ **Change of Perspective**

2. “[...] durch [...] **bekommt man** eine **ganz andere Sichtweise** auf solche Themen“ (“[but] because of [...] **you get** a **totally different perspective** onto such topics“)

⇒ **Change of Perspective**

3. “Ein Buch für alle, die [...] unsere emotionalen Reaktionen **besser verstehen wollen**“ (“A book for everyone who **wants to better understand** [...] our emotional reactions“)

⇒ **Voluntary Act**

4. “Auch wenn nicht jeder Baum beschrieben wird [...] das **ich mir alles sehr gut vorstellen konnte**“ (“Even if not every tree is described [...] **I could imagine everything**“). ⇒ **Change of Perspective**

• RESEARCH WORKFLOW:

1. Manual annotation of components of reviews, their contents, reviewing processes, the emotions of reviewers, their recommendations etc. ⇒ **430** reviews
2. Analysis of sentences with **4** types of labels
3. Manual extraction of indicators
4. Application of indicators in queries to the combined corpus of online book reviews from **Amazon** and other platforms
5. Use of found sentences as training data for a classifier

Cat	Description	Number of sentences	Number of Patterns
A5	cultural education	89	25
A8	comprehensibility	120	20
G2	own competences	42	12
O8	comparison	82	17

• EXAMPLE PATTERNS FOR CATEGORY **A5**

(Writing about the education effect)

1. **Pattern 1**: “vertiefen“+ indirect object

⇒

[parse1=‘OBJ.HD.*’][0,3][lemma = ‘vertiefen’] within s

Found Sentences: 97 Relevant Sentences: **36**

“Man kann sein **Wissen noch vertiefen** mit dem Buch !“

(“You can even **deepen your knowledge** with this book!“).

2. **Pattern 3**: Adj in comparative + “Einblick“+ verb (“geben | bekommen“)

⇒

[pos = ‘R.*’][lemma = ‘Einblick’][lemma = ‘geben’] [lemma = ‘bekommen’] within s

Found Sentences: 767 Relevant Sentences: **655**

“So konnte man die einzelnen Charaktere viel besser kennenlernen und hat einen viel **besseren Einblick in die Gefühlswelt jedes**

Einzelnen bekommen.“

(“This way you can get to know single characters much better as well as get a much **better insight into their feelings individually**“)

3. **Pattern 22**: “lernen“(Past Participle) + “mit|aus“+ Noun

⇒

a [lemma = ‘lernen’ & pos = ‘Vmp.*’][0,7][lemma = ‘aus’ | lemma = ‘mit’]

b [lemma = ‘aus’ | lemma = ‘mit’][0,7][lemma = ‘lernen’ & pos = ‘Vmp.*’]

Found Sentences: 338 Relevant Sentences: **59**

“**Mit Hilfe dieses Buches habe ich gelernt** , viel besser

objektorientiert zu programmieren .“

(“**With the help of this book i have got** better at object-oriented programming“)

• Results of TRAINING

– SVM model, A5 vs all, simple bag-of-words

– initial annotated data set

test: 30, train: 93

– new annotated data set:

test: 234, train: 1899

data	precision	recall	f-score
old	0.29	0.13	0.18
new	0.76	0.85	0,80

• FUTURE WORK

1. Add corpora from other sources
2. Add features to the learning algorithm (system of weights to tackle imbalance)
3. Compare algorithm with human annotation (previously unseen texts)
4. Repeat