HOW TO ANNOTATE EMOTIONS IN HISTORICAL ITALIAN NOVELS: A CASE STUDY ON *I PROMESSI SPOSI*

Rachele Sprugnoli, Arianna Redaelli

INTRODUCTION

Methodological description of the annotation process of a 19th-century novel, *I Promessi Sposi* (*The Betrothed*), written by Alessandro Manzoni, using 3 emotion classifications.

GOALS

- How different granularities impact on the annotation?
- How different granularities impact on IAA?
- Which classification has the best coverage?
- Are there any important emotions missing from the chosen classifications?

CONTRIBUTIONS

- Data with aggregated and non-aggregated labels
- XIX century polarity lexicon

METHODOLOGY

Data Selection

- Chapter VIII of *I Promessi Sposi*

Annotation Workflow

- Manual sentence splitting: 338 sentences, 9,000+ tokens
- 2 annotators
- 3 classifications: emotion polarity (4 labels), Plutchik's basic emotions (8 labels), GoEmotions taxonomy (27 labels)

Data Analysis

- IAA (Krippendorff's α):
  - Emotion Polarity: 0.73
  - Plutchik's Emotions: 0.53
  - GoEmotions: 0.44
- Higher IAA:
  - Emotion Polarity: negative, neutral
  - Plutchik's Emotions: sadness, fear
  - GoEmotions: love, curiosity
- Most frequent classes:
  - Emotion Polarity: neutral, negative
  - Plutchik's Emotions: neutral, anticipation
  - GoEmotions: neutral, nervousness
- Disparity in label frequency: negative and ambiguous emotions are prevalent
- Majority of sentences with a single label
- Greater granularity allows better specification of emotional nuances, reducing neutral labels

PRELIMINARY EXPERIMENTS

- Polarity detection (F1):

W-MAL lexicon (Vassallo et al., 2020)	0.21
XIX Cent. lexicon	0.45
Cross-lingual model (Sprugnoli et al., 2023)	0.37

- Emotion classification (F1 only on fear, joy, sadness, anger):

FEEL-IT (Bianchi et al., 2021)	0.34
XLM-EMO (Bianchi et al., 2022)	0.47

EMOTION ANNOTATION ELICITATION

- Involvement of non-experts with an online questionnaire
  - "Tell us which emotions are expressed in each sentence, you can report one or more emotions"
  - 1 week, 45 participants
  - 21 sentences from Chapter VIII
- Results:
  - Synonyms to express the same emotion
  - Mention of recurring emotions not in the classifications
  ➡ Revision and improvement of the guidelines

FUTURE WORKS

- Expand annotation to other chapters
- Test the annotation on other novels
- Apply a reader-oriented approach to obtain a complementary perspective on emotions