

# Data Set Publication: Appraisal Theories for Dimensional Modelling of Emotions in Text

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## Introduction

This zip file (available from <https://www.ims.uni-stuttgart.de/data/appraisalemotion>) contains supplementary material for the paper:

Enrica Troiano, Laura Oberländer, and Roman Klinger. 2023. Dimensional Modeling of Emotions in Text with Appraisal Theories: Corpus Creation, Annotation Reliability, and Prediction. *Computational Linguistics*, 49(1):1–72.

The data for this paper has been collected with the intention of creating a textual corpus of event descriptions, annotated with emotions and appraisal variables directly by the person who lived through the event. For each event description author, the corpus contains, in addition, demographic information. Further, a subset of instances has been validated by additional annotators.

If you make use of these data, please cite this work as:

```
@article{troiano-etal-2023-dimensional,
  title = "Dimensional Modeling of Emotions in Text
    with Appraisal Theories: Corpus Creation, Annotation
    Reliability, and Prediction",
  author = {Troiano, Enrica and
    Oberl{\a}nder, Laura and
    Klinger, Roman},
  journal = "Computational Linguistics",
  volume = "49",
  number = "1",
  month = mar,
  year = "2023",
  address = "Cambridge, MA",
  publisher = "MIT Press",
  url = "https://aclanthology.org/2023.cl-1.1",
  doi = "10.1162/coli_a_00461",
  pages = "1--72",
}
```

## Content

- TroianoOberlaenderKlinger-crowdenVENT-2023.pdf: The paper which describes the studies, results, and the data set.
- corpus/crowd-enVent\_generation.tsv: Data of 6600 event descriptions (Prolific IDs are encrypted)
- corpus/crowd-enVent\_validation.tsv: Data of 6000 validations; 1000 instances sampled from the generated data, each annotated by 5 people (Prolific IDs are encrypted).
- questionnaires/: Questionnaires as PDF printouts for the different phases of the data collection.
- predictions/: Predictions by models that we used to evaluate the importance of appraisals for emotion categorization.
- corpus/masked.txt: Words and phrases removed from the generated texts prior to validation.

## Variables

Each text has been generated by asking people on Prolific to complete the sentence (for a given emotion):

I felt [emotion] when/that/if...

The data (`crowd-enVent_generation.tsv`) contains this emotion and other variables, relevant for further use are:

- Column 2: trigger emotion
- Column 6–17: prior emotion of the annotator
- Column 18,19: generated text (with and without hidden emotion words)
- Column 20–23: Event and emotion duration, intensity, annotation confidence
- Column 24–44: Appraisals, as described in Troiano et al. 2022, LREC
- Column 46–: Demographic information and personality traits according to Gosling et al. 2003, Journal of Research in personality

## Contact:

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## Details on the file format

Columns in `crowd-enVent_generation.tsv` and `crowd-enVent_validation.tsv` are tab-separated, and appear in the following order.

Generation	Validation
round_number	round_number
emotion	original_emotion
text_id	text_id
timestamp	timestamp
prolific_id	prolific_id
anger	anger
boredom	boredom
disgust	disgust
fear	fear
guilt	guilt
joy	joy
pride	pride
relief	relief
sadness	sadness
shame	shame
surprise	surprise
trust	trust
generated_text	–
hidden_emo_text	–
–	emotion
event_duration	event_duration
emotion_duration	emotion_duration
intensity	intensity
confidence	confidence
–	event_familiarity
suddenness	suddenness
familiarity	familiarity

Generation	Validation
predict_event	predict_event
pleasantness	pleasantness
unpleasantness	unpleasantness
goal_relevance	goal_relevance
chance_responsblt	chance_responsblt
self_responsblt	self_responsblt
other_responsblt	other_responsblt
predict_conseq	predict_conseq
goal_support	goal_support
urgency	urgency
self_control	self_control
other_control	other_control
chance_control	chance_control
accept_conseq	accept_conseq
standards	standards
social_norms	social_norms
attention	attention
not_consider	not_consider
effort	effort
exert	exert
understand	understand
control_check_0	control_check_0
control_check_1	control_check_1
control_check_2	–
previous_participation	–
age	age
gender	gender
education	education
ethnicity	ethnicity
extravert	extravert
critical	critical
dependable	dependable
anxious	anxious
open	open
quiet	quiet
sympathetic	sympathetic
disorganized	disorganized
calm	calm
conventional	conventional
did_you_lie?	–
feedback_impressions	–
feedback_task_duration	–
feedback_on_topic_list	–
status_approval	–
comments	comments
original_demographics	original_demographics

## Description of columns

Most of the columns correspond between generation and validation. Below are their descriptions, compared among generation and validation, and the values that they can take.

`round_number`

The round in which the annotation was collected.

- generation: Possible values are `round-2`, `round-3`, ..., `round-9`. They differ with respect to the set of prompting emotions, and the text production strategy. From `round_7` on, fewer emotions were used because the rounds served to balance out the corpus.
- validation: Possible values are `pretest`, `test`, `balance_1`, `balance_2`, `balance_3`, `balance_4`. The `balance_n` rounds served to annotate instances that were annotated less than 5 times.

`emotion`

The emotion assigned to the text.

- generation: The prompting emotion for which the text was written.
- validation: The emotion reconstructed by the validators.

In both cases, possible values are: `anger`, `boredom`, `disgust`, `fear`, `guilt`, `joy`, `pride`, `relief`, `sadness`, `shame`, `surprise`, `trust` and `no-emotion`.

`original_emotion`

The emotion of the text used in validation.

- validation: This column corresponds to the column *emotion* in generation.

`text_id`

- generation: An id is assigned to each text (the first number always corresponds to the `round_number`).
- validation: The ids of the texts used for validation correspond to those in generation.

`timestamp`

The time at which the survey was taken.

`prolific_id`

Id of the worker taking our survey.

- generation: Encrypted (i.e., non original) id of the writer.
- validation: Encrypted id of the reader.

`anger`, `boredom`, `disgust`, `fear`, `guilt`, `joy`, `pride`, `relief`, `sadness`, `shame`, `surprise`, `trust`

Current emotions

- generation & validation: One score on a 1-to-5 scale, indicating the degree to which the participant felt each of such emotions before taking the survey (1: Not at all, 5: Extremely).

`generated_text`

- generation: The text produced by the writers.

`hidden_emo_text`

Text to be shown at validation time.

- generation: Event description modified by us with some heuristics to hide emotion-related words (replaced by "...").

`event_duration`, `emotion_duration`, `intensity`, `confidence`

Characteristics of the emotion episode.

- generation & validation: For `event_duration` and `emotion_duration`, one value among `seconds`, `minutes`, `days`, `hours`, `weeks` and `seconds`. `Emotion_duration` has the additional option `I had none` (only in generation) and `this event did not cause any emotion` (only in validation). Confidence and intensity were rated on a 1-to-5 scale (1: Not at all, 5: Extremely).

event\_familiarity

First-person knowledge of the judged event.

- validation: Rated on a 1-to-5 scale, indicating if the validators ever had a comparable experience to the event that they judged (1: No, never, 5: Yes, definitely). It can be compared to the column *did\_you\_lie?* in generation (see below).

suddenness, familiarity, predict\_event, pleasantness, unpleasantness, goal\_relevance, chance\_responsblt, self\_responsblt, other\_responsblt, predict\_conseq, goal\_support, urgency urgency, self\_control, other\_control, chance\_control, accept\_conseq, standards, social\_norms, attention, not\_consider, effort

Appraisal dimensions

- generation & validation: Rated on a 1-to-5 scale (1: Not at all, 5: Extremely).

previous\_participation

Whether a participant took our surveys in the past

- generation: Yes, first time, I will answer the following questions./No, I participated before and answered the next set of questions. Annotators participating for the first time had to answer demographics and personality-related questions.
- validation: We do not report this variable in the validation side, as all annotators could only participate once, and did not overlap with the generators.

age, gender, education, ethnicity, extravert, critical, dependable, anxious, open, quiet, sympathetic, disorganized, calm, conventional

Demographics and personality-related questions

- generation & validation: Personality questions are rated on a 1-to-7 scale, with 1: Disagree strongly, 2: Disagree moderately, 3: Disagree a little, 4: Neither agree nor disagree, 5: Agree a little, 6: Agree moderately, 7: Agree strongly.

did\_you\_lie?

Actual experience of the recounted event

- generation: The event really happened in my life.; I never experienced that event, but I really imagined how it would make me feel. This question was asked to know if the reported appraisals the appraisals were (at least partially) recalled or just thought to hold for the described situation.

original\_demographics

- generation: COPIED FROM: `textids`: for workers who provided demographics- and personality-related information in multiple participations, the values for the columns *extravert*, ..., *conventional* are averaged across their answers, corresponding to the rows with *text\_id* = `textids`.
- generation and validation: ORIGINAL: the values under the personality traits columns are as they were indicated by the worker. COPIED FROM: `Welcomeback!`: workers at the time of completing the questionnaire, but later in a separate form (we gave people the chance to come back and only undertake that part of the survey –see `demographics_only.pdf` in the folder `questionnaires`)