Measuring Appropriateness of Emotion

with the electronic Levels of Emotional Awareness Scale

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The Test

eLEAS — Levels of Emotional Awareness Scale

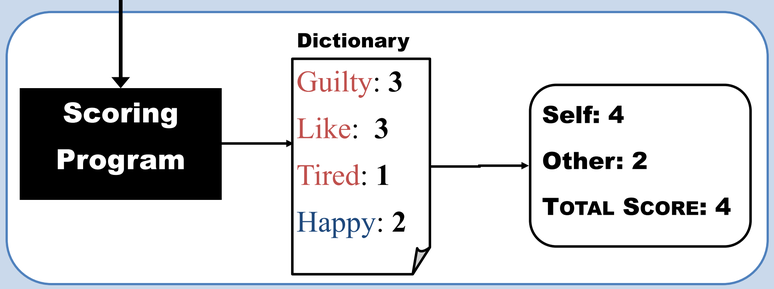
- 20 questions asking how you and another person would feel in a given situation
- Each question is meant to elicit one of four types of emotion:
  - ⇒ Anger
  - ⇒ Happiness
  - ⇒ Fear
  - ⇒ Sadness

Sample happiness LEAS question:

"A loved one gives you a back rub after you return from a hard day's work. How would you feel? How would your loved one feel?"

Sample response:

"I would feel **guilty** and **like** they were **tired** of me.
They would not feel **happy** with me."



Notes on scoring:
The eLEAS uses the same scoring system as the manually-scored version.
The highest-ranked word in each group (self and other) is the score given for that category. If a category has two words of weight 3 that describe different emotions, that category is scored as a 4. If both categories receive scores of 4, the total score is 5.

Preparing the Data

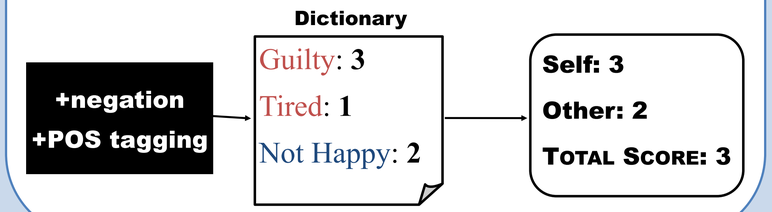
Problems:

- **Negation** — need to consider that *happy* is preceded by *not*
- **Disambiguation** — here, *like* is not used to express an emotion; it is used as an adverb

"I would feel **guilty** and **like** they were **tired** of me.
They would **not** feel **happy** with me."

Solutions:

- Use a simple tokenization algorithm to determine parts of speech ("Parts of Speech Tagging") and ignore non-verbs and nouns
- Whenever the interpreter sees a negating word, set a flag and record any emotion words in the same clause as "NOT *word*".



While negation does not affect the original score (negated words carry the same weight as the same non-negated word) negation is required for appropriateness.

Building the Model

- Give each emotion word in the dictionary a vector representing the probability of that word appearing in an appropriate response to each of the four emotional categories.
- Sum the probabilities of all words in the response and normalize the score for the intended emotion.

Word & weight	Anger	Fear	Happiness	Sadness
Guilty (3)	1.1037	1.0134	0.3111	1.1023
Tired (1)	0.4237	0.2542	0.2966	0.0254
Not Happy (2)	0.6666	0.9525	0.0	1.3809
Normalized Result Vector:	-0.931	-0.806	-4.703	0.0941

The higher the score, the more appropriate the response.

Conclusions:

- A more accurate metric of emotional awareness, as separate from the ability to express emotion
- Automated method allows for quick and simple calculation of appropriateness in conjunction with the overall score

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