Emotions in Software Testing

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What feelings do we experience

- …in everyday life?
- …within a development project?
- …as we're designing and performing testing?

Why do we even *have* feelings?

What do we do with them?

Why Is This Important, Testers?

- Software development is a human activity.
- Humans are creatures of rationality *and* emotion.
- Emotions and feelings are triggers for alertness and awareness.
- Problems are linked to desires, and desires are linked to feelings.
- THEREFORE: An implicit part of your *preparation* and your *mission* is to recognize, analyze, exploit, and manage your emotional states and reactions.

Templates and Machines Don't Get *Aroused*
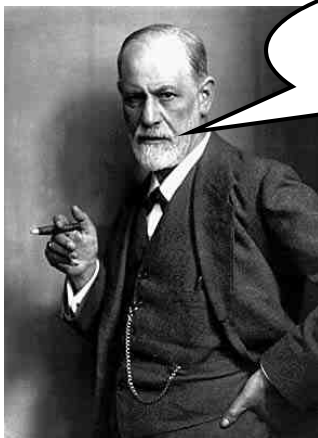
No, not THAT kind of arousal.

arousal (n.): a physiological and psychological state of being awake, important in regulating consciousness, attention, and information processing.

Affective Priming
Preparing Your Emotional Mindset

- developing confidence
- pushing aside feelings of intimidation
- building tolerance for mistakes
- allowing tolerance for confusion
- inoculating yourself against stress
- embracing and celebrating the new
- avoiding learned helplessness
- managing reactions and responses
- recognizing emotional oracles

General Examples of Oracles
things that suggest "problem" or "no problem"

- A reference document with useful information.
- A known good example output.
- A known bad example output. **Mechanisms**
- A process or tool by which the output is checked.
- A process or tool that helps a tester identify patterns.
- A person whose opinion matters.
- An opinion held by a person who matters. **People**
- A disagreement among people who matter.
- A feeling like confusion or annoyance. **Feelings**
- *A desirable consistency between related things.*

Principles

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How Do People React to Software?

Impatience   Frustration   Amusement

Surprise   Confusion   Annoyance

What Might Feelings Tell Us?

Impatience	⇨ an intolerable delay?
Frustration	⇨ a poorly-conceived workflow?
Amusement	⇨ a threat to someone's image?
Surprise	⇨ inconsistency with expectations?
Confusion	⇨ unclear interface? poor testability?
Annoyance	⇨ a missing feature?
Boredom	⇨ an insignificant test?
Tiredness	⇨ time for a break?
Fear	⇨ a dangerous situation?
Curiosity	⇨ a pointer to useful investigation?

Oracles!

Feelings as Heuristic Triggers for Oracles

- An emotional reaction or a feeling is a trigger to attention and learning.

- Without emotion, we don't reason well.
  - See Damasio, *The Feeling of What Happens*

- When you find yourself mildly concerned about something, someone else could be *very* concerned about it.

- Observe emotions to help overcome your biases, to evaluate significance, and to calibrate responses.

> Emotions and feelings are signals.
> Look into what they're signalling.

Suggested Activities

- Catalog some of the feelings that we experience in project work.

- Identify the connections between feelings and oracles (ways to recognize problems) that point to bugs and issues.

- Describe the process of finding and investigating a bug, and map out the feelings involved.

- Look at the relationships between feelings, politics, power, and quality.

- Observe how feelings are honoured and devalued in the workplace.