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.
• 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.
• A disagreement among people who matter.
• A feeling like confusion or annoyance.
• A desirable consistency between related things.
How Do People React to Software?

- Impatience
- Frustration
- Amusement
- Surprise
- Confusion
- Annoyance

What Might Feelings Tell Us?

<table>
<thead>
<tr>
<th>Feeling</th>
<th>Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Impatience</td>
<td>an intolerable delay?</td>
</tr>
<tr>
<td>Frustration</td>
<td>a poorly-conceived workflow?</td>
</tr>
<tr>
<td>Amusement</td>
<td>a threat to someone’s image?</td>
</tr>
<tr>
<td>Surprise</td>
<td>inconsistency with expectations?</td>
</tr>
<tr>
<td>Confusion</td>
<td>unclear interface? poor testability?</td>
</tr>
<tr>
<td>Annoyance</td>
<td>a missing feature?</td>
</tr>
<tr>
<td>Boredom</td>
<td>an insignificant test?</td>
</tr>
<tr>
<td>Tiredness</td>
<td>time for a break?</td>
</tr>
<tr>
<td>Fear</td>
<td>a dangerous situation?</td>
</tr>
<tr>
<td>Curiosity</td>
<td>a pointer to useful investigation?</td>
</tr>
</tbody>
</table>
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.