Nature of emotion

Reading:
Reeve (2018)
Ch 11
(pp. 285–312)

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Outline
1. What is an emotion?
2. What causes an emotion?
3. How many emotions are there?
4. What good are emotions?
5. Can we control our emotions?
6. Difference between emotion & mood?

Based on Reeve (2018, p. 285)

What is an emotion?

Feelings
- Subjective experience
- Phenomenological
- Cognitive interpretation

Bodily arousal
- Preparation for action
- Physiological activation
- Motor responses

Emotion
- A distinct pattern of neural activity

Sense of purpose
- Impulse to action
- Goal-directed motiv. state
- Functional aspect to coping

Expressive behaviour
- Social communication
- Facial expression
- Vocal expression

Based on Reeve (2018, Figure 12.1 Four components of emotion, p. 287)
Components of sadness

Feelings
- Aversive
- Negative
- Feeling of distress

Bodily arousal
- Decreased heart rate
- Low energy level

Sense of purpose
- Desire to take action to overcome or reverse the separation or failure.

Expressive behaviour
- Inner eyebrows raised
- Corners of lips lowered
- Lower lip pouting, trembling

Sadness
Increased activation in medial prefrontal cortex

Definition of emotion

“short-lived, feeling-purposive-expressive-bodily responses that help us adapt to … important life events”

Definition of emotion

“synchronised brain-based systems that coordinate feeling, bodily response, purpose, and expression so as to ready the individual to adapt successfully to life circumstances”

Relationship between motivation & emotion

- Emotion as motivation: Emotions are one type of motive which energises and directs behaviour.
- Emotion as readout: Emotions serve as an ongoing “readout” system to indicate how well or poorly personal adaptation is going.

What causes an emotion?

Significant life event
- Distinct patterns of neural activity
- Cognitive processes
- Biological processes

Feelings
- Sense of purpose
- Bodily arousal
- Expressive behaviour

Question 2

What causes an emotion?

Based on Reeve (2018, pp. 289)

Based on Reeve (2018, p. 288)

Based on Reeve (2018, pp. 290-291)

Based on Reeve (2018, Based on Figure 12.3, p. 291)
Two-systems view
(Buck, 1984)

- Evaluative, interpretive, & personal significance of event
- Parallel, interactive, & coordinated output to activate and regulate emotion

Significant stimulus event
- Sociocultural learning history of individual
- Evolutionary, phylogenetic response of the species
- Cortical structures & pathways
- Sub-cortical structures & pathways

Based on Reeve (2015, Figure 12.4, Two systems view of emotion, p. 293)

Other two-systems views

- The two systems influence one another (Levenson, 1994)
- Some emotions are:
  - primarily from the biological system (e.g., fear and anger)
  - other emotions arise from experience, modeling, and culture (e.g., gratitude and hope) (Panksepp, 1994)

Feedback loop in emotion

Emotion = chain of events that aggregate into a complex feedback system.

- Arousal
- Cognition
- Preparation for action
- Feelings
- Emotion
- Overt behavioural activity
- Expressive displays

Based on Reeve (2018, Figure 12.5 Feedback loop in emotion, p. 293)

What ends an emotion?

- Removal of the significant life event
- Engaging in successful coping behaviour.

Based on Reeve (2018, pp. 293-294)

Biology is causal core of emotion

- Infants (Izard, 1989)
- Emotions happen to us (Ekman, 1992)

Based on Reeve (2018, pp. 294-297)

Cognitive activity is required for emotion

- Appraisal needed (Lazarus, 1984, 1991a,b)
- Specific appraisals (good/bad, cope, morality) (Scherer, 1994, 1997)
- Attribution (Weiner, 1986)

Based on Reeve (2018, pp. 294-297)
Question 3

How many emotions are there?

Meet Riley’s Emotions - Inside Out (2015)

YouTube (3:08 mins)
https://www.youtube.com/embed/nEUzQ7yL9A0?end=188

How many emotions are there?

Based on Reeve (2018, pp. 297-299)

Biological perspective
- 2 to 8
- Primary emotions (e.g., fear, anger, sadness, disgust, interest, joy)

Cognitive perspective
- Unlimited
- Stresses complex (secondary, acquired) emotions

Basic emotions

Significant life events

Fear: potential of threat and harm
Anger: fighting off threat and harm
Disgust: rejecting threat and harm
Sadness: after threat and harm
Interest: motive involvement
Joy: satisfaction

Response to threat and harm
Response to involvement and satisfaction

Based on Reeve (2018, pp. 294-295)

Basic emotion criteria

1. Distinct facial expression
2. Distinct pattern of physiology
3. Automatic (unlearned) appraisal
4. Distinct antecedent cause
5. Inescapable (inevitable) activation
6. Presence in other primates
7. Rapid onset
8. Brief duration
9. Distinctive subjective feeling state
10. Distinctive cognition (e.g., thoughts, images)

Based on Reeve (2018, p. 297)

Basic emotion exclusion reasons

1. Experience-based derivative of a basic emotion (e.g., anxiety is a derivative of fear)
2. Mood (e.g., irritation)
3. Attitudes (e.g., hatred)
4. Personality traits (e.g., hostile)
5. Disorders (e.g., depression)
6. Blends (e.g., love = interest + joy)
7. Aspect of emotion (e.g., a cause (such as homesickness) or consequence (such as avoidance))

Based on Reeve (2018, p. 298)
What is an emotion? (Ekman)

YouTube (7:35 mins)
https://www.youtube.com/watch?v=g8ZDLOAg_Po

What good are the emotions?

Utility of emotion:

Coping
→ adapt better to life event

Social functions
→ make social interactions better

Based on Reeve (2019, pp. 299-301)

There is no such thing as a bad emotion

■ “Negative” emotions are unpleasant or aversive
■ However, there is no such thing as a “bad” emotion
■ All emotions serve an adaptive, functional purpose.

Based on Reeve (2018, p. 300)

Basic emotion → Life event → Coping function

■ Threat or danger → Fear → Protect, avoid
■ Interference with goal pursuit → Anger → Overcome barriers & restrictions
■ Spoilt object → Disgust → Repulsion
■ Separation or failure → Sadness → Reverse the separation or failure
■ Novelty, need-involvement → Interest → Explore, take in information
■ Goal progress & attainment → Joy → Sooth, play

Based on Reeve (2018, Table 12.2, p. 353)

Coping functions of emotion

■ Emotions help people deal with fundamental life tasks (such as threat, obstacles, loss, and achievement).
■ When encountering a task, we have an automated way of coping that is generally effective.
■ Basic emotional reactions are a good (although sometimes too primitive) start to solving fundamental life tasks.
■ We can learn to cope more effectively.

Based on Reeve (2018, pp. 299-300)
Social functions of emotion

- Communicate our feelings: e.g., infants, caregivers.
- Influence how others interact with us: Emotional expressions let others predict how we will respond to them.
- Invite and facilitate social interaction: e.g., a social smile says, “I am friendly; I would like us to be friends.”
- Create, maintain, & dissolve relationships: e.g., joy brings us together, anger breaks a relationship.

Based on Reeve (2018, pp. 300-301)

Question 5

Can we control our emotions?

Emotion regulation

When a person seeks to understand and manage:
- which emotion is experienced
- when it is experienced
- how it is experienced
- how it is expressed publicly

Based on Reeve (2018, pp. 299-300)

Emotion regulation strategies

1. Situation selection: taking action to make an emotional experience more or less likely.
2. Situation modification: problem-focused coping, efforts to establish control, and searching for social support.
3. Attentional focus: redirecting attention within the situation.
4. Reappraisal: changing the way one thinks about the situation to modify the emotional impact.
5. Suppression: down-regulating one or more of the aspects of emotion (bodily arousal, cognitive, purposive, expressive).

Based on Reeve (2018, pp. 304-306)

Situation selection

- Taking action to make an emotional experience more or less likely (e.g., choose what to do, where to go, who to spend time with, which activities to engage in etc.).
- Selecting one situation over another (e.g., friend → joy: job interview → interest, fear, regret).
- Strategic effort to prevent an emotion from launching (e.g., “If I go there, I’ll feel sad. So, I won’t go.”).

Based on Reeve (2018, p. 304)

Situation modification

- Problem-focused coping - efforts to establish primary control over a situation (e.g., via search for social support).
- Emotion-eliciting events unfold over time (e.g., a confrontation with a bully starts with fear, but we can express challenge or appeasement, tell a joke, hurl an insult, bring along a big friend, etc.).

Based on Reeve (2018, p. 304)
Attentional focus

- Redirect one’s attention within the situation.
- There are multiple aspects of any experience that one might attend to.
- Distraction is a common, effective strategy.
- Rumination increases the intensity and duration of negative emotionality.

Based on Reeve (2018, pp. 304-305)

Reappraisal

- Changing thinking about an emotion-eliciting situation in order to modify its emotional impact.
- Change the meaning of the situation (e.g., If someone bumps into you, you may feel angry, but could reappraise as empathy or pity.).
- Negative functional reappraisal: Event bad, but not tragic (e.g., “Frustrating to be hassled, but can stand it.”)

Based on Reeve (2018, p. 305)

Suppression

- Down-regulation of emotional experience (including feeling, bodily activation, sense of purpose, or expression).
- Mostly involves “do nots” (e.g., do not laugh at the politically incorrect joke, do not show anger at the boss, do not cry at the sad movie, do not show fear during the job interview).
- Blunt strategy which tends to backfire - usually produces more, not less of the emotion.

Based on Reeve (2018, pp. 305-306)

Lie detection – Lie to me trailer

YouTube
(2:07 mins)
http://www.youtube.com/watch?v=GVG5AwZph-s

Question 6

What is the difference between emotion and mood?

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Emotions</th>
<th>Moods</th>
</tr>
</thead>
<tbody>
<tr>
<td>Antecedents</td>
<td>Significant life events</td>
<td>Ill-defined</td>
</tr>
<tr>
<td>Action-Specificity</td>
<td>Specific</td>
<td>Influence cognition</td>
</tr>
<tr>
<td>Time course</td>
<td>Short-lived</td>
<td>Long-lived</td>
</tr>
</tbody>
</table>

Based on Reeve (2018, p. 306)
Mood

- Mild, long-lasting, everyday, low-level, general way of feeling.
- Mood and affect are synonyms.
- Positive affect and negative affect are independent ways of feeling.

Based on Reeve (2018, p. 306)

Positive affect

- Pleasurable
- Reward-driven (appetitive)
- Approach behaviour
- Dopaminergic pathways

Negative affect

- Unpleasant
- Punishment-driven (aversive)
- Withdrawal behaviour
- Serotonergic & noradrenergic pathways

Based on Reeve (2018, pp. 307-308)

Diurnal variation in positive and negative affect

Figure 12.8 Levels of Positive Affect (PA) and Negative Affect (NA) as a function of time of day in two studies (Clark & Watson, 1989)

Positive affect

Everyday, low-level, general state of feeling good.

Benefits of feeling good:
- Prosocial behaviour
- Creativity
- Decision-making efficiency
- Sociability
- Persistence in the face of failure

Based on Reeve (2018, pp. 309-310)

Circumplex model of affect

Affect is a blend of Valence and Arousal

Valence

Arousal

Based on Reeve (2018, Figure 12.7)

Summary

- What is emotion? Feeling, body, motivational, expressive
- Where do emotions come from? Life events activate neural circuits in the sub-cortical brain, causing biological and cognitive response
- How many emotions are there? Biological: small set of core emotions; Cognitive: many more emotions
- What good are emotions? Emotions help us cope, communicate, and adapt
- Can we control our emotions? Emotions are often automatic, but we can learn to self-regulate. What works best is a flexible, situation-specific, and situationally-sensitive intervention effort.
- Emotion vs. mood? Emotion is short-lasting; mood is longer-lasting
References

