Aspects of emotion Dr James Neill Centre for Applied Psychology University of Canberra 2011

Aspects of emotion

(Emotion Part 2):

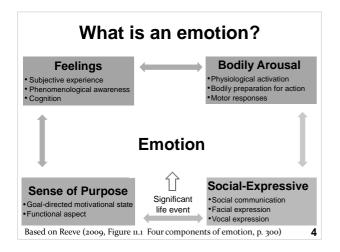
Biological, cognitive & socio-cultural aspects)
Reading:
Reeve (2009)
Ch 12

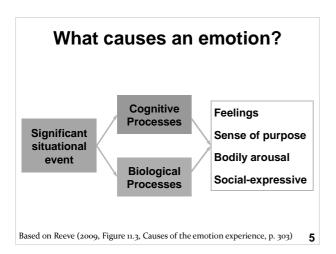
(pp. 329-364)

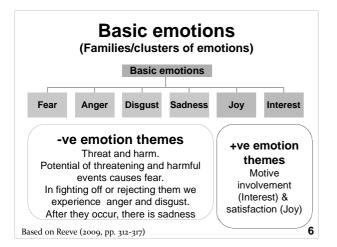
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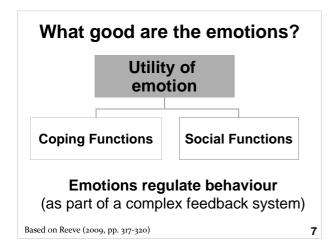
Review of last lecture: Five perennial questions about emotion

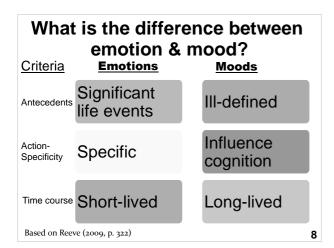
- 1. What is an emotion?
- 2. What causes an emotion?
- 3. How many emotions are there?
- 4. What good are the emotions?
- 5. What is the difference between emotion & mood?

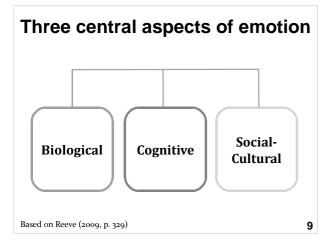












Biological James-Lange theory Contemporary perspective Differential emtions theory Facial feedback hypothesis	 Cognitive Appraisal Complex appraisal Appraisal process Emotion knwoledge Attributions Socio-cultural Social interaction Emotional socialization
sed on Reeve (2009, p. 329)	10
Aspects	of emotion
	Autonomic nervous system
Biological Aspects	Endocrine system Neural brain circuits Rate of neural firing Facial feedback
Biological Aspects Cognitive Aspects	 Endocrine system Neural brain circuits Rate of neural firing
	 Endocrine system Neural brain circuits Rate of neural firing Facial feedback Appraisals Knowledge Attributions Socialisation history

James-Lange theory of emotion

- 1. Does each emotion have unique bodily reactions?
- 2. To what extent do bodily changes induce emotion?

 $\begin{array}{c} \text{Stimulus} \rightarrow \text{Emotion} \rightarrow \text{Bodily reaction} \\ \text{or} \end{array}$

 $Stimulus \to Bodily \ reaction \to Emotion$

James-Lange theory of emotion: Two hypotheses 1. The body reacts uniquely to different emotion-stimulating events, 2. The body does not react to nonemotion-stimulating events. Emotional experience is a way of making sense of bodily changes (e.g., a sudden cold shower → increased heart-rate/arousal \rightarrow emotion e.g., surprise/shock/fear) James-Lange theory of emotion: Criticisms 1. The body reactions were part of a general fight-flight response that did not vary between emotions 2. Emotions are experienced more quickly than physiological reactions 3. Physiological arousal augments rather than causes emotion. Its role is small, supplemental and relatively unimportant. James-Lange theory of emotion: **Contemporary perspective** 1. Distinct physiological differences (e.g., Heart rate and Skin temperature) are

- 1. Distinct physiological differences (e.g., Heart rate and Skin temperature) are evident for some emotions (e.g., anger, fear, sadness, and disgust). But only a few emotions have distinct ANS patterns (ones with survival value).
- 2. Emotions recruit biological and physiological support to enable adapative behaviours such as fighting, fleeing, and nurturing.

Specific neural circuits

- 1. Emotion-specific patterns in brain activity.
- 2. Gray: Behavioural approach, Fight-flight system, and Behavioural inhibition (→ Joy, Fear Rage and Anxiety)
- 3. Neural activation: Different emotions activated by different rates of cortical neural firing: activity increases, stays the same, or decreases.

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Neural activation

•Neural firing: The pattern of electrocortical activity (in the brain) at any time
•Different emotions are activated by different rates of cortical neural firing

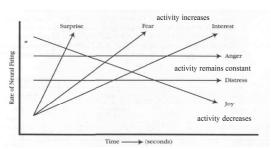


Figure 12.1 Emotion Activation as a Function of Changes in the rate of Neural Firing Based on Reeve (2009, Figure 12.1, p. 335; Source: Tomkins (1970))

Differential emotions theory

- 1. Ten emotions constitute the **principal motivation system** for human beings.
- 2. **Unique feeling**: Each emotion has its own unique subjective, phenomenological quality.
- 3. **Unique expression**: Each emotion has its own unique facial-expressive pattern.
- 4. **Unique neural activity**: Each emotion has its own specific rate of neural firing that activates it.
- 5. **Unique purpose/motivation**: Each emotion generates distinctive motivational properties & serves adaptive functions.

Based on Reeve (2009, p. 335)

Izard's 10 fundamental emotions (Differential emotions theory)

Positive Emotions	Neutral Emotions	Negative Emotions
Interest Joy	Surprise	Fear Anger Disgust Distress Contempt Shame Guilt
Based on Reeve (2009, Tal	19	

Ekman's 7 reasons why biological theories focus on a small number of basic emotions

- 1. Nonbasic emotions are experience-based
- 2. Many terms better describe moods (e.g., irritation).
- 3. Many terms better describe attitudes (e.g., hatred).
- 4. Many terms better describe personality (e.g., hostile).
- 5. Many terms better describe disorders (e.g., depression).
- 6. Some terms are blends of emotions (e.g. love).
- 7. Many terms refer to specific aspects of an emotion (e.g., homesickness)

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Facial feedback hypothesis

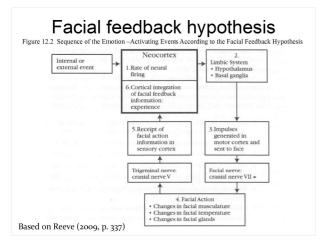
Emotion stems from feelings aroused by:

- 1. Movements of the facial musculature
- 2. Changes in facial temperature
- 3. Changes in glandular activity in the facial skin

e.g., Does smiling make you happy?



Fig. 1.—Diagram of the muscles of the face, from Sir C. Re



Facial feedback hypothesis

- Strong version of FFH (Facial feedback engenders emotion) – most studies suggest a small effect.
- 2. Weak version of FFH (Facial feedback modifies intensity of emotion): Consensus of support that highlights the two-way relation between emotional feeling and emotional expression. However, critics content that the effect of facial feedback is small.

Cognitive aspects of emotion

The central construct in a cognitive understanding of emotion

 An appraisal is an estimate of the personal significance of an event.

Without an antecedent cognitive appraisal of the event, emotions do not occur.

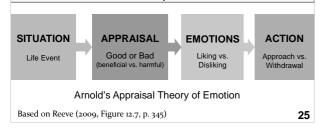
The appraisal, not the event itself, causes the emotion.

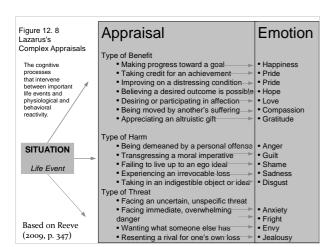
Based on Reeve (2009, pp. 333-334)

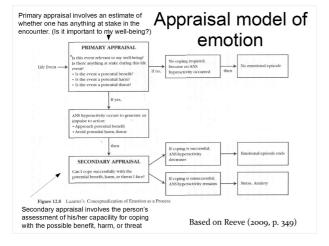
Appraisal theory of emotion

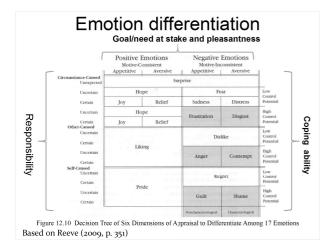
3 questions

- 1. How does the perception of an object or event produce a good or bad appraisal?
- 2. How does the appraisal generate emotion?
- 3. How does felt emotion express itself in action?









Appraisal theory of emotion

Complex appraisal theories are about 65-70% accurate in predicting people's emotions. Why not 100%?

- 1. Other processes contribute e.g., biology
- 2. Appraisals intensify rather than cause emotion
- 3. Patterns of appraisal for many emotions overlap
- 4. Developmental differences
- 5. Emotion knowledge and attributions

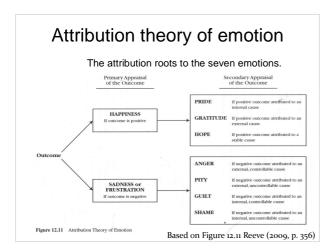
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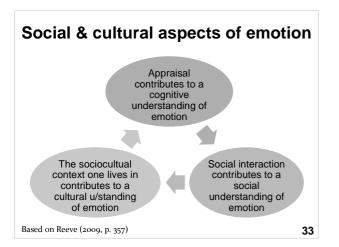
Emotion knowledge

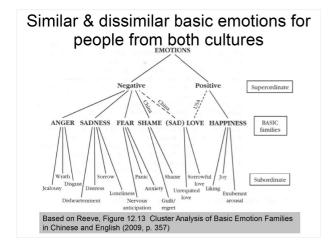
- We learn to distinguish finer shades of emotion as we develop (distinctions are stored cognitively).
- 2. An individual's emotion knowledge is the number of emotions s/he can distinguish.
- 3. Emotion knowledge partially underlies the rationale for teaching emotional intelligence.

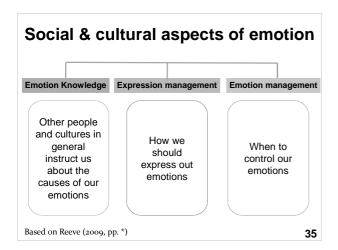
Attributions

- 1. An attribution is the reason the persons uses to explain an important life outcome.
- 2. Primary attribution good or bad
- 3. Secondary attribution cause
- 4. Primary + secondary attributions → emotion









Socio-cultural aspects of emotion

- 1. Mimicry
- 2. Feeback
- 3. Contagion
- 4. Emotional socialisation
- 5. Managing emotions

Upcoming lectures

- Individual differences
- (i)
- ■Personality (Ch13)
- ■Unconscious motivation (Ch 14)
- ■Growth psychology (Ch 15)
- Summary & conclusion (Ch 16)

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References

- Reeve, J. (2009). *Understanding motivation and emotion* (5th ed.). Hoboken, NJ: Wiley.
- Tomkins, S. S. (1970) Affect as the primary motivational system. In M. B. Arnold (ed.), Feelings and emotions (pp. 101-110). New York: Academic Press.

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