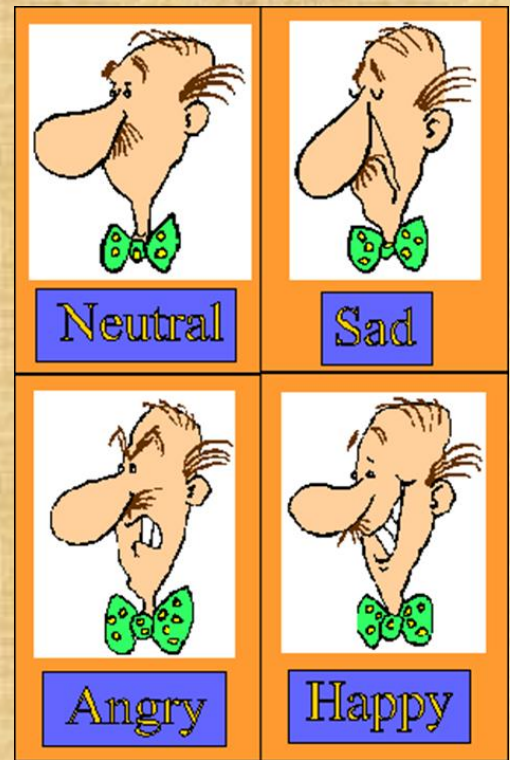


Emotion is a 3-part process consisting of:

- Physiological arousal
- Cognitive interpretation
- Behavioral expressions

While our emotions are very different, they all involve a state of mental and physical arousal focused on some event or experience.



Heart Pounding

**Quickened,
Hurried
Pace**

FEAR
(FEELING)

**Interpreting
and
feeling
fear**

Why Do We Have Emotional Responses?

- probable adaptive value
 - anger → fighting
 - fear → running / hiding
 - love → protection / caring
 - disgust → avoiding

Why Do We Have Emotional Responses?

- external emotional cues very useful in social situations
 - facial expressions
 - body language / posture
- e.g., if others can see we are angry, they can avoid us, or avoid provoking us

Emotions

What makes you "ick?"
What makes you "love?"



Where we are headed:

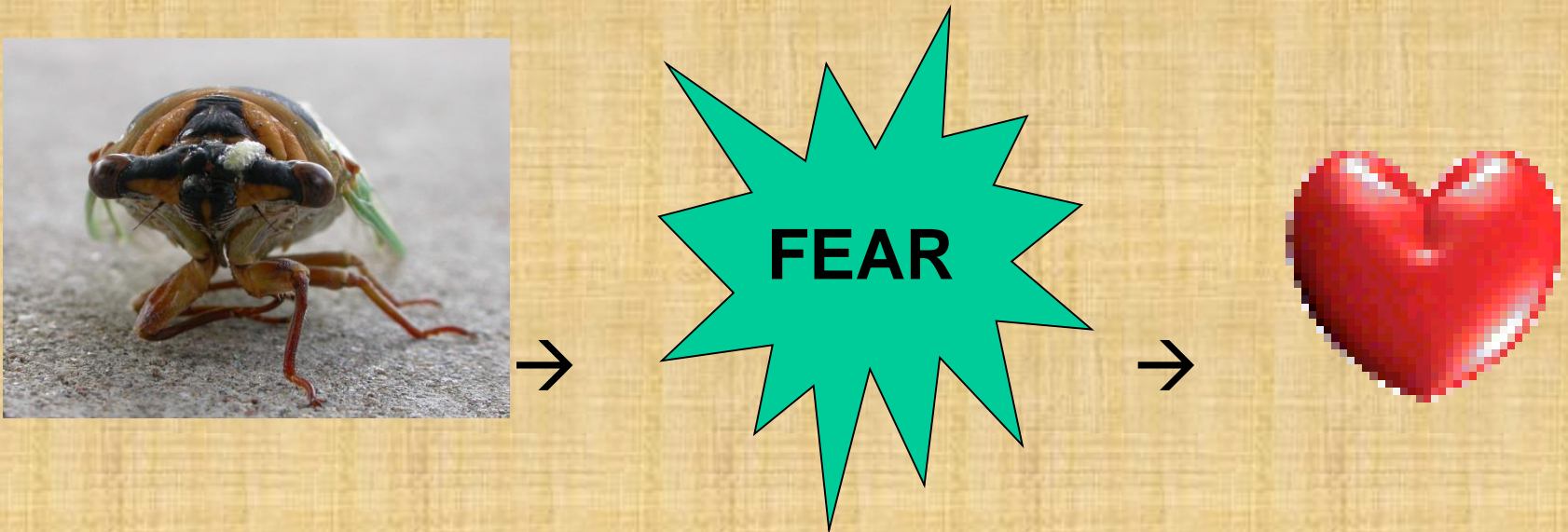
- What are four theories of emotion?
 - common sense theory
 - Cannon-Bard theory
 - James-Lange theory
 - Two-factor theory

ALL DEAL WITH - 3 Basic Elements of an Emotion

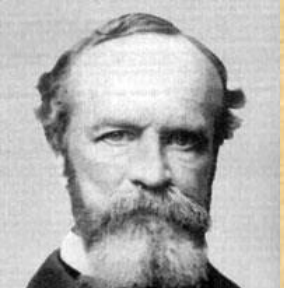
- Conscious (Subjective) component (how emotion is experienced)
- Physiological component (how body reacts to emotion)
- Expressive Behavior (how we behave in response to the emotion.)

1. Common-sense theory

- Situation → emotion → bodily reaction



Key approach: "feelings make us behave"



2. James-Lange theory

Situation → bodily reaction → emotion



Key approach: "behavior makes us feel"



2. James-Lange theory

~~Body = emotion~~

Essentially - the experience of an emotion is the experience of the body. If you don't have a body, you can't really have emotion.

Crush example



2. James-Lange theory





2. James-Lange theory

- Testing the theory:
- Hypothesis 1: You need the body in order to feel emotions.
- Test: Interview people with high vs. low spinal cord injuries

High spinal cord injury:

"Sometimes I act angry... But it doesn't have the heat to it that it used to. It's a mental kind of anger."



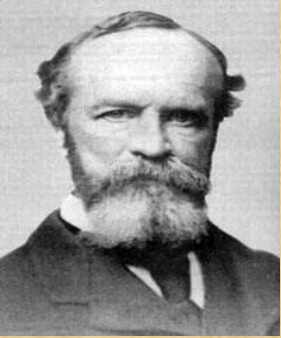
2. James-Lange theory

- Testing the theory:
- Hypothesis 1: You need the body in order to feel emotions.
 - Results 1: The body may be necessary to have a full emotional experience.



2. James-Lange theory

- Testing the theory:
- Hypothesis 1: You need the body in order to feel emotions ✓
 - Results 1: The body may be necessary to have a full emotional experience.
- Hypothesis 2: All you need is your body to know what emotion to feel.



2. James-Lange theory

- Situation → bodily reaction → emotion



FEAR

or

LOVE?



2. James-Lange theory

- Testing the theory:
- Hypothesis 1: You need the body in order to feel emotions
 - Results 1: The body may be necessary to have a full emotional experience.
- Hypothesis 2: All you need is your body to know what emotion to feel.
 - Test: Gave people a dose of adrenaline:
"I feel as if I'm angry"





2. James-Lange theory

- Testing the theory:
- Hypothesis 1: You need the body in order to feel emotions
 - Results 1: The body may be necessary to have a full emotional experience.
- Hypothesis 2: All you need is your body to know what emotion to feel.
 - Results 2: The body is not ALL that is necessary to have a fully emotional experience.

3. Cannon-Bard theory

Situation → emotion
 → bodily reaction



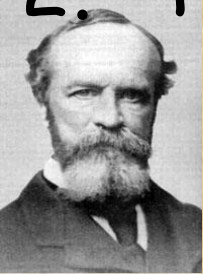
Key approach:
"behavior and feeling
are simultaneous"

The Theories of Emotion

1. The "Common-Sense" theory

Key approach: "feelings make us behave"

2. The James-Lange theory



Key approach: "behavior makes us feel"

Two experiments: one pro, one against

3. The Cannon-Bard Theory

Key approach: "behavior and feeling are simultaneous"



4. The Schachter two-factor theory

Key approach: "interpretation is key"



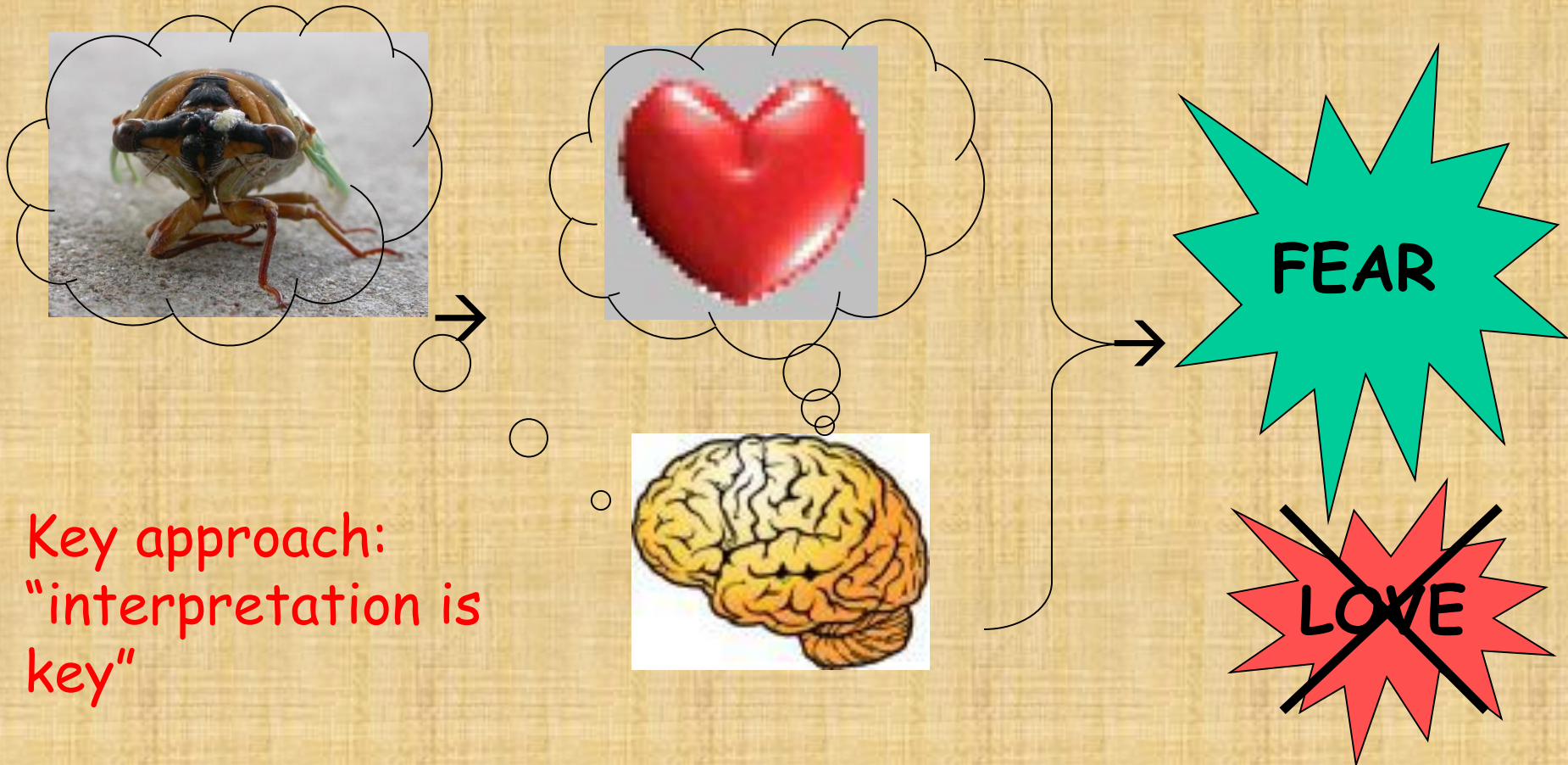
Cognitive Appraisal

- Do you think that we think or feel first?
- How would you feel when you realized someone backed into your car?
- Would reaction change when you realized it was your mother who had accidentally done it?
- Does your *thinking* about an event change your *emotions* about the event?

4. The Schachter 2 factor theory



- Situation → bodily reaction → emotion + cognitive appraisal



Key approach:
"interpretation is key"

4. The Schachter 2 factor theory



- Testing the theory:
- Hypothesis: The same bodily reaction will cause one emotion in one situation, and another emotion in a different situation.
 - Give people a dose of adrenaline;
 - Put them in different situations;
 - What happens?



Lessons Learned

Theory:

What we learned:

Common-Sense theory

James-Lange theory

Cannon-Bard theory

Schachter theory

Emotions have purpose

The body's reaction is an important part of feeling an emotion

The body's reaction and emotional experience occur as one

Our interpretation is a necessary part of feeling an emotion

The Opponent-Process Theory of Emotion

(Solomon and Corbit, 1974)

Emotional reactions are biphasic; a primary reaction is followed by an opposite after-reaction

The primary reaction becomes weaker with repeated stimulations

The after-reaction is strengthened

Physiological Similarities

Physiological responses related to the emotions of fear, anger, love, and sexual arousal are very similar.

make it stop,
make it stop
make it stop
make it stop

Lets ride this
all day!

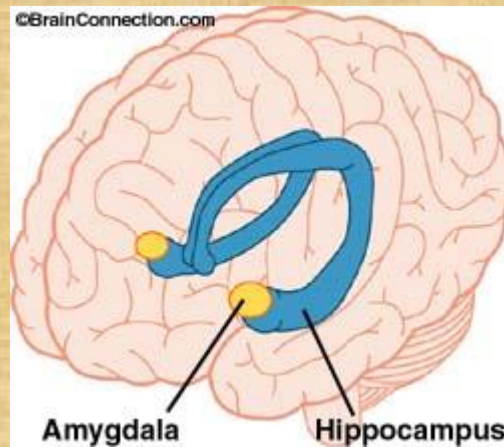


M. Grecco / Stock Boston

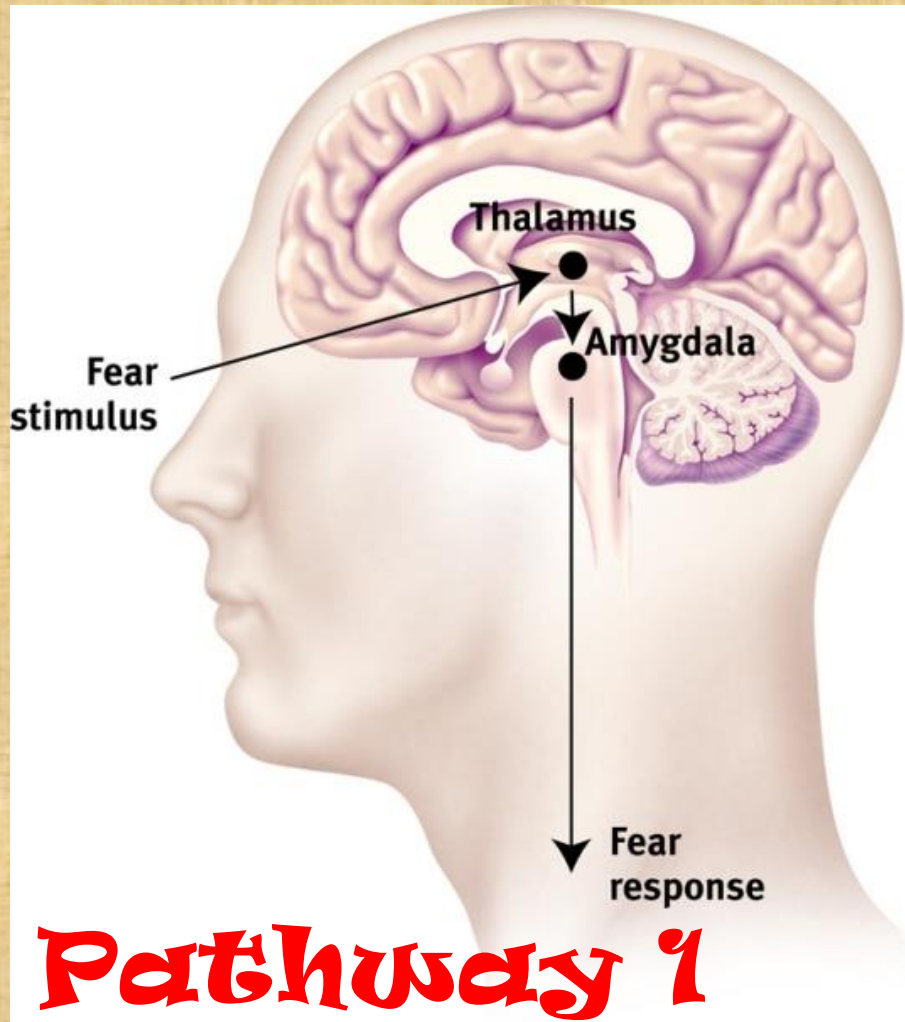
Excitement and fear involve a similar physiological arousal.

Origins of Emotions

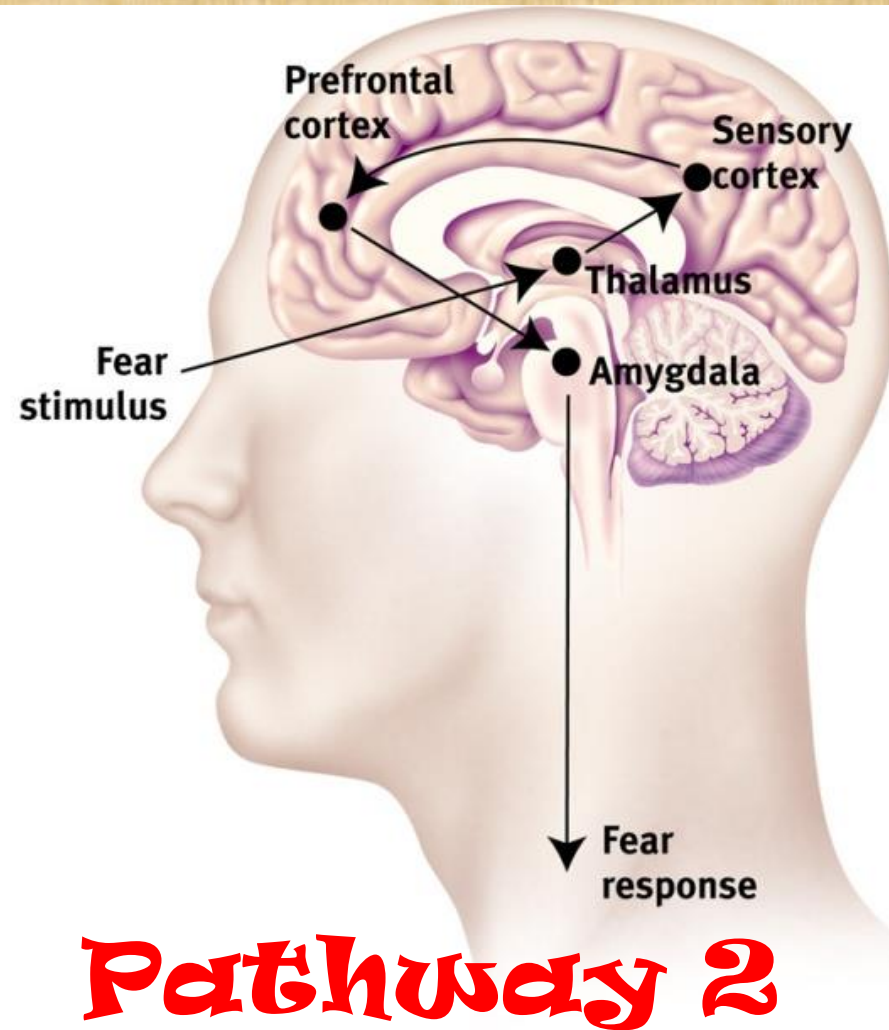
- The biggest breakthrough in the study of emotions was the discovery of two distinct emotional pathways in the brain.
 - 1 One of the pathways is *fast*, and operates mainly at an *unconscious level* and has a built-in, innate sensitivity to certain cues.
 - 2 The other pathway is much *slower*, is linked to *explicit memory*, and relies heavily on the cerebral cortex.
- Both rely heavily on the limbic system.
- The amygdala plays an especially important role in both emotion pathways - negative AND positive emotions.



The Emotional Brain



(a) The speedy low road



(b) The thinking high road

Cognition Can Define Emotion

Spillover Effect: Arousal fuels emotion; cognition channels it.

An arousal response to one event spills over into our response to the next event



Arousal from a soccer match can fuel anger, which could “spillover” into a riot.

OR... The tendency for one person’s emotion to affect how others around him feel.



Give the subject a shot of adrenaline