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## James-Lange Theory of Emotion

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We have experiences, and as a result, our autonomic nervous system creates physiological events such as muscular tension, heart rate increases, perspiration, dryness of the mouth, etc. This theory proposes that emotions happen as a result of these, rather than being the cause of them.

Proposed by 19<sup>th</sup> century scholars William James and Carl Lange, the James-Lange Theory of Emotion presents a sequence explaining the cause-and-effect relationship between emotions and physiological events.

The banner features the Explorable logo and the text 'Quiz Time!' in a white, handwritten-style font. Below this, there are three white-bordered cards on an orange background. The first card shows a pair of red roller skates on a wooden floor with the text 'Quiz: Psychology 101 Part 2'. The second card shows a fan of colorful pens with the text 'Quiz: Psychology 101 Part 2'. The third card shows a Ferris wheel at sunset with the text 'Quiz: Flags in Europe'. To the right of the cards is a white link that says 'See all quizzes =>'.

## The Theory

**Event ==> Arousal ==> Interpretation ==> Emotion**

The above sequence summarizes the Theory of Emotion, a combination of concepts developed by William James, a psychologist from the United States and Carl Lange, a physiologist from Denmark. According to the theory, when an event stimulates a person (arousal), the autonomic nervous system (ANS) reacts by creating physiological manifestations such as faster heart beat, more perspiration, increased muscular tension, and more. Once these physical events occur, the brain will interpret these reactions. The result of the brain's interpretation is an emotion [1]. In this sense, the theory is likened to the "fight-or-flight" reaction, in which the bodily sensations prepare a person to react based on the brain's

interpretation of the event and the physiological events.

In his statements, Lange attempted to give a simple explanation of his theory by relating its concept to the concept of common sense. He said that our common sense tells us that if a person encounters a bear, he tends to feel afraid and then he runs. According to Lange's theory, seeing a bear causes the ANS to stimulate the muscles to get tensed and the heart to beat faster. After such bodily changes, that is the time that emotion of fear emerges. It is as simple as saying that statement A, "My heart beats faster because I am afraid." is more rational than statement B, "I am afraid because my heart beats faster." Furthermore, Lange explained that statement B would just make the perception of the event a pure cognitive occurrence, and would be "destitute of emotional warmth".

## Criticisms

The James-Lange Theory has been criticized by many theorists, including Walter Cannon and Philip Bard who opposed the theory with their own theory of motivation, the Cannon-Bard Theory [2]. One of the criticisms emerged from the experiments on rats to test the James-Lange Theory. The theory explains that the emotions depend on the impulses from the periphery, primarily the viscera. However, Cannon's experiments revealed that the viscera react slowly to stimuli since the viscera are composed of smooth muscles and glands. This means that a person feels the emotion prior to the occurrence of bodily changes. The experiments on rats and cats also revealed that cutting the visceral nerves has no effect on emotions.

The James-Lange Theory is indeed an important theory as it is one of the earliest theories that provided explanations of the physiologic process of emotion. However, the theory has been largely refuted by later theorists who gave clearer concepts on the said process.

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### Links

[1] <https://explorable.com/nature-of-emotions>

[2] <https://explorable.com/cannon-bard-theory-of-emotion>