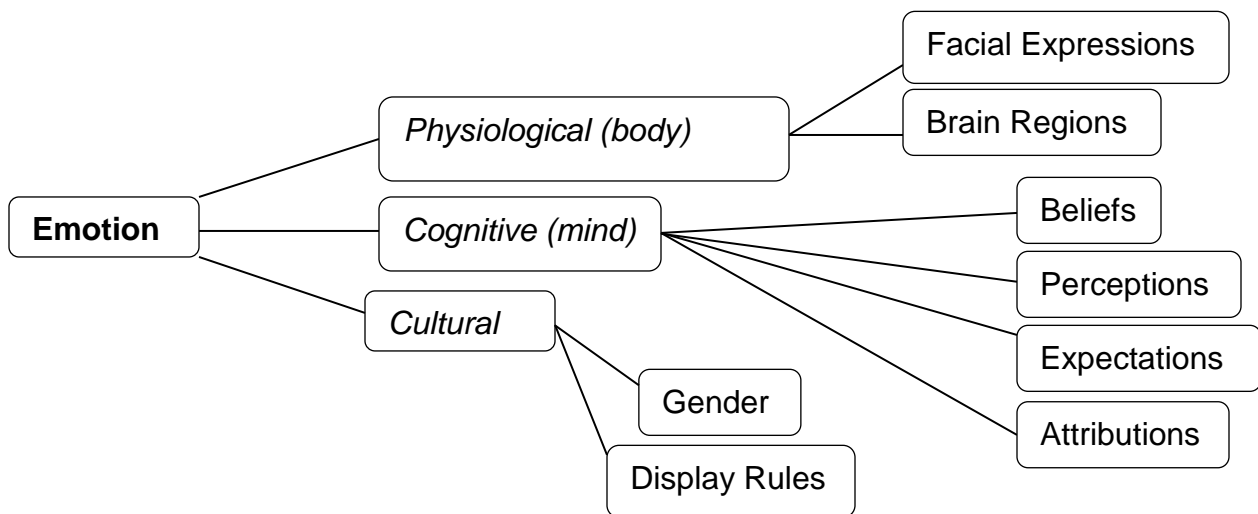


The Psychology of Emotions

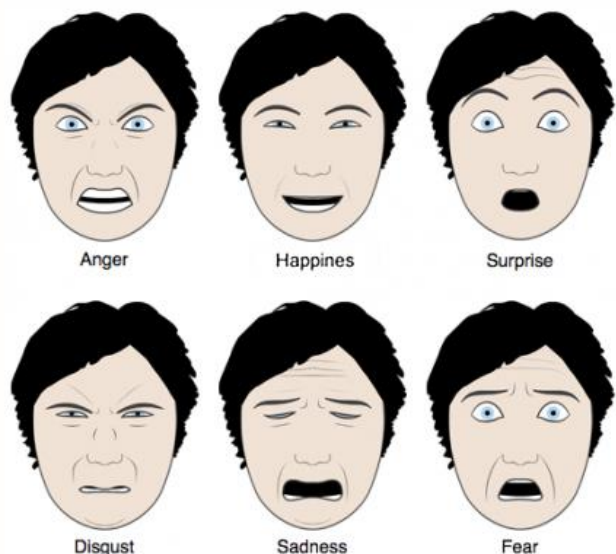
Emotion is defined as a complex state of feeling involving facial and bodily changes, brain activation, cognitive appraisals, subjective feelings and tendencies to influence thought and behaviour. Psychologists focus on three components related to emotion including physiological (biological), cognitive and cultural. Each of these components are further associated with other factors.



Physiological Aspects of Emotion

Research on the physiological aspects of emotions suggests that certain emotions known as **primary emotions** are inherent to us all. These include the emotions of fear, anger, sadness, joy, surprise, disgust, and contempt, which are distinctly visible as physiological patterns and facial expressions (see figure on the right – note this does not include contempt).

Conversely, **secondary emotions** are specific to certain cultures and are dependent on cognitive complexity.



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1) What is the purpose of facial expressions?

Several regions of the brain are known to be involved in: recognition of another person's emotion, feeling of an emotion, expression of an emotion, and the acting (whether rationally or irrationally) on of an emotion. This is in addition to activation of the autonomic nervous system in response to certain emotions (ex. fear during a "fight or flight" response in which epinephrine and norepinephrine are released).

Brain Region	Response
Amygdala	Scrutinizes the emotional importance of incoming sensory information, particularly fear and anger. Involved in the initial decision to approach or withdraw.
Cortex	Determines the significance of the emotional information from the amygdala. Prefrontal cortex is involved in the impulses to approach or withdraw based on emotion. Left prefrontal cortex is specialized for the motivation to approach others (ex. Because of a positive emotion), whereas the right prefrontal cortex is specialized for the impulse to withdraw or escape (ex. Because of fear). Can override the amygdala's initial response.
Mirror Neurons	Brain cells that are involved in empathy, imitation, and reading emotions. Are active when a person or animal observes others carrying out an <i>intentional</i> action.
Other Brain Regions	Although the amygdala and prefrontal cortex are usually listed as the key players in identifying and responding to emotions, several other brain regions are also involved (hippocampus, thalamus) and work in tandem with one another.

2) At the level of society, why are mirror neurons important for us?

Cognitive Aspects of Emotion

In addition to how emotions are dependent on physiological arousal, they also depend on how one interprets or explains that arousal. This can be based on *beliefs*, *perceptions* of the situation, *expectations* and *attributions* (explanation of behaviours). These factors including the emotions they influence can however change over time with age (children do not have very different thoughts and emotions than adults). Cognition and physiological arousal are closely related because thoughts affect emotions and emotional states influence thoughts.

3) Your friend recently scored an A- in her psychology course. Although you think that is a great mark, she is very upset and considers repeating the course. What is contributing to her emotional reaction?



Emotions and Culture

As mentioned previously, almost all human beings are capable of feeling primary, hardwired emotions. Individuals however differ in their abilities to experience secondary emotions. Some psychologists believe there is no distinction between primary and secondary emotions because there is no aspect of any emotion that is not influenced by culture or context. For example, although anger may be universal, it may be experienced differently from culture to culture.

Cultures also have their *display rules* for emotions which are the rules about when, how and where a person should express/suppress emotions. Display rules are also responsible for governing body language, nonverbal signals of body movement, posture, gesture and gaze. However, sometimes individuals do not actually feel the emotions which society expects of them (ex. being friendly at a job interview) and as a result emotions are intentionally acted out in what is known as emotion work.

Gender and Emotions in the Context of Culture:

There is little evidence to suggest that one gender feels any of the everyday emotions more often than the other. However, the major difference between the sexes has to do with how and when their emotions are expressed, and how they are perceived by others. Differences are not universal and differ across cultures. For example, North American women are more likely to acknowledge and talk about their emotions that reveal weakness, whereas most North American men tend to control and mask their negative feelings. These differences can be overridden by a particular situation such as with major events (sports games) or when it is required (jobs).

4) Which sex is more emotional?

Answers:

- 1) The purpose of facial expressions is to influence our internal feelings and reflect these feelings to the outside world. From an evolutionary perspective, facial expressions likely evolved to help us communicate our emotional states to others and to provoke a response. It is also crucial for non-verbal communication, particularly in the case with infants who are unable to communicate verbally.
- 2) Mirror neurons are the underlying mechanism for human empathy, nonverbal rapport and the spreading of an emotion from one person to another. At the societal level, this is important for bonding with others and for creating altruism, where we can work and respond to the benefit of a common good.
- 3) Your friend is likely upset because of cognitive effects including beliefs, expectations, and attributions. It is possible that your friend had the belief that they could have performed better. It is also possible that your friend had certain expectations of their self which they failed to meet in this case. Finally, the upset nature of the emotions could have been attributed to the difficulty of the course or perhaps their own lack of self-confidence.
- 4) Sometimes men are more emotional, sometimes women are, and sometimes neither. The emotional response of the sexes depends on certain circumstances including cultural context. For example, in Asian cultures, both sexes are taught to control emotional expressions.

