

Emotions

Psychology



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Biopsychology Theories of Emotions Biopsychology Theories of Emotions

Darwin's Theory Darwin's theory of emotion postulates that particular emotional responses like the human facial expressions tend to accompany similar emotional states in every member of a species (Pinel, 2009).

According to Darwin, emotional expressions are products of evolution. He suggests that emotional expressions evolved from behaviors that signify what an animal is likely to do next. He also notes that opposite messages are in most cases signaled by opposite movements and postures (Pinel, 2009).

According to Darwin, the complexity of the coordinated autonomic and motor union contributes to emotional expressions. He notes that defensive rage and aggression in cats entails a hunched posture, growling, ear retraction, and other signs of autonomic discharge. He also observed that predatory aggression among members of the same species involves quiet stalking and a biting attack upon catching the prey. Darwin, therefore, concluded that defensive rage is elicited by electrical stimulus of the medial hypothalamus of the brain while similarly the same stimulus elicit predatory attacks within the lateral placements of the hypothalamus in cats, rats and opossum (Pinel, 2009).

James-Lange's Theory

James-Lange's theory is based on the physiological bases of emotion in which he suggests that stimulus that induce emotions are received and interpreted by the brain, which then triggers visceral changes, which then subsequently triggers the experience of emotions (Pinel, 2009). According to James-Lange, one feels sad because he/she cries as opposed to crying because he or she is sad. The brain mechanism, he notes, works such that the sensory system sends a message to the brain about one's currents

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situation, and because of this, the brain sends signals to the body. This triggers the muscle tone, and heart rate. The sensory system then reacts to the changes triggered by the brain and this sensory activity is what constitutes emotion. This implies that physiological changes are the emotions (Pinel, 2009).

Cannon-Bird Theory

This theory suggests that emotional experiences may occur independently of emotional expressions. In his argument, Cannon suggests that a person can experience emotions even if physiological changes are not sensed (Pinel, 2009). According to Cannon, the thalamus plays a big role in emotional sensation. He proposes that sensory inputs are received by the brain's cerebral cortex, which then triggers certain changes in the body. He notes that the stimulus-response neural loop is devoid of any emotion. In this regard, emotional signals reach the thalamus either directly from the sensory nerves or through cortical input (Pinel, 2009).

Limbic System

The limbic system theory suggests that emotional expressions are controlled by numerous interconnected neural structures called limbic systems. This is a collection of tracts and nuclei, which borders the thalamus (Pinel, 2009). Emotional states are thus expressed through actions of other limbic structures within the hypothalamus of the brain. These are then experienced through the work of the limbic structures situated in the cortex (Pinel, 2009).

References

Pinel J. P. J. (2009). Biopsychology. Boston, MA: Allyn & Bacon (chapt. 17).