

## THE BIOLOGICAL AND PSYCHOLOGICAL SIGNIFICANCE OF EMOTIONS

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### Abstract:

This article explores the intricate interplay between the biological and psychological significance of emotions in the human experience. Emotions are fundamental to our existence, influencing our interactions with the world and shaping our subjective experiences. From a biological perspective, emotions are deeply rooted in the intricate workings of the brain and the body, directing physiological responses and influencing overall well-being.

**Keywords:** Emotions, biology, neurobiology, physiology, brain, hormones, evolution, survival, neural pathways, limbic system.

### Introduction:

Nowadays due to the rapid globalization in the world, the importance of emotions has become even more of current interest. It is obvious that emotions play a huge role in daily routine of every person. When people say "emotions" they usually mean quite various reactions – range, anger, aggression or just a sort of a change of mood. It is commonly believed, that emotions reflect a person's inner state of wellbeing. Emotions are developed in a young age and they, in fact, help to behave in a society and be its part. According to the research by Robert M. Sapolsky in his book "Why Zebras Don't Get Ulcers", "If a neuron secretes a chemical messenger that travels a thousandth of an inch and causes the next cell in line to do something different, that messenger is called a neurotransmitter. If a neuron (or any cell) secretes a messenger that, instead, percolates into the bloodstream and affects events far and wide, that messenger is a hormone." [1] Emotions play an important role in our lives from a biological point of view. They are an evolutionarily established system that helps the body adapt to a changing external environment. Emotions cause physiological reactions such as increased heart rate, increased blood pressure, increased hormone release and many others. Each emotion has its own unique biological imprint, which allows a person to adapt to the surrounding situation.

One of the main functions of emotions is to protect the body. Some emotions, such as fear, protect us from potential dangers by forcing us to move away from their source. When we feel fear, our body prepares for fight or flight. This happens because emotion causes activation of the sympathetic nervous system, which is responsible for increasing the level of adrenaline in the blood. This helps us respond to threats faster and increases our chances of survival. Emotions also play an important role in shaping our behavior and interactions with other people. For example, emotions associated with love and affection help strengthen our relationships with people close to us. They also help us understand how other people experience themselves and connect with them.

University Professor of Neuroscience and Psychiatry, Huda Akil claims that emotions are vital: "We simply can't live without emotions," Dr. Akil emphasizes. "If you experience something positive, you want to remember it in a certain way, perhaps so you can experience it again. The same with things that are negative— you want to remember them to avoid them in the future. It's when you get stuck or disconnected from reality that emotions become a problem.[2]

While looking at emotions from both, positive and negative view it should be noted that according to Barbara Fredrickson's broaden-and-build theory of positive emotions, certain positive emotions (joy, pride, contentment, etc.) "share the ability to broaden people's momentary thought-action repertoires and build their enduring personal resources, ranging from physical and intellectual resources to social and psychological resources".[3]

At the same time, there are some benefits of negative emotions. "Low-level stressors stimulate the production of brain chemicals called neurotrophins and strengthen the connections between neurons in the brain. This may be the primary mechanism by which exercise (a physical stressor) helps boost productivity and concentration". [4] Dr. Shelton said. Hence, according to the scientific researchers that were carried out it has become clear that emotions control such aspects of life as emotional stability, interaction with colleagues, family members, react to the current events.

## Conclusion

It can be claimed that emotions greatly influence to the human being. Even negative emotions along with positive ones can lead people to the right way, mostly helping to come to certain decisions, reactions, and conclusions in the life. It is evident that emotions play a crucial role in both biological and psychological aspects of human beings. From influencing our interactions with the environment to regulating physiological responses, emotions are deeply intertwined with our overall well-being. Understanding the biological underpinnings of emotions can provide valuable insights into mental health, while the psychological significance of emotions sheds light on how they shape our thoughts, behaviors, and relationships. By recognizing the intricate interplay between our biology and psychology, we can strive to cultivate a more comprehensive understanding of emotions and their profound impact on our lives.

## References

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