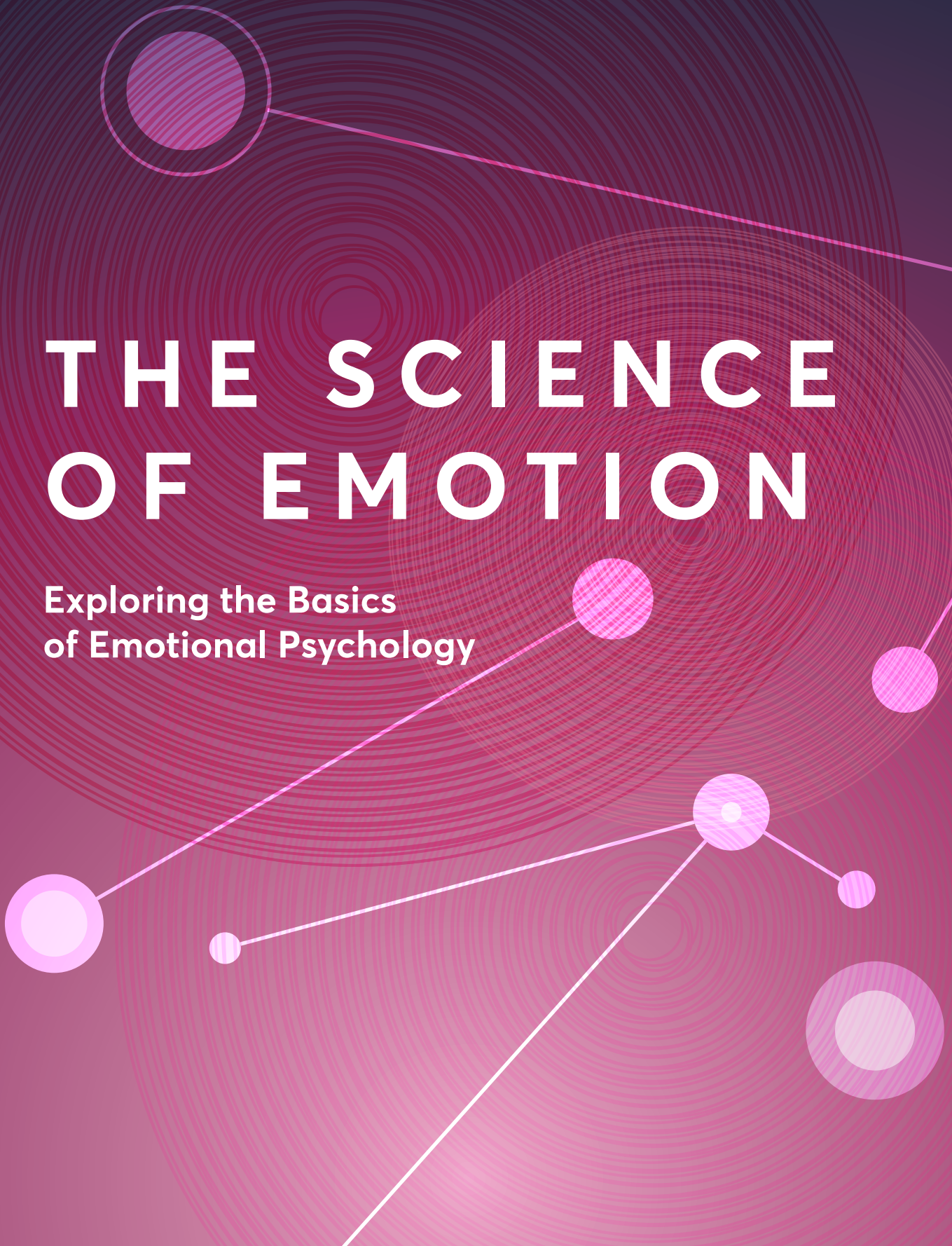


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THE SCIENCE OF EMOTION

Exploring the Basics
of Emotional Psychology





INTRODUCTION

How we interpret and respond to the world around us makes up who we are and contributes to our quality of life. The study of emotional psychology allows researchers to dive into what makes humans react as they do to certain stimuli and how those reactions affect us both physically and mentally. While the study of emotional psychology is vast and complex, researchers have discovered quite a bit about what constitutes our emotions and our behavioral and physical reactions to them.



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DEFINING EMOTIONS

Emotions are often confused with feelings and moods, but the three terms are not interchangeable. According to the American Psychological Association (APA), emotion is **defined** as “a complex reaction pattern, involving experiential, behavioral and physiological elements.” Emotions are how individuals deal with matters or situations they find personally significant. Emotional experiences have three components: a subjective experience, a physiological response and a behavioral or expressive response.

Feelings arise from an emotional experience. Because a person is conscious of the experience, this is classified in the same category as hunger or pain. A feeling is the result of an emotion and may be influenced by memories, beliefs and other factors.

A mood is **described** by the APA as “any short-lived emotional state, usually of low intensity.” Moods differ from emotions because they lack stimuli and have no clear starting point. For example, insults can trigger the emotion of anger while an angry mood may arise without apparent cause.

Defining emotions is a task that is not yet complete. Many researchers are still proposing theories about what makes up our emotions, and existing theories are constantly being challenged. Still, there’s a good basis of knowledge to analyze when exploring the topic.



THE PROCESS OF EMOTION

While there is debate about sequence, there is general agreement that emotions, as mentioned earlier, are made up of three parts: subjective experiences, physiological responses and behavioral responses. Let's look at each of these parts in more detail.

Subjective Experiences

All emotions begin with a subjective experience, also referred to as a stimulus, but what does that mean? While basic emotions are expressed by all individuals regardless of culture or upbringing, the experience that produces them can be highly subjective.

Subjective experiences can range from something as simple as seeing a color to something as major as losing a loved one or getting married. No matter how intense the experience is, it can provoke many emotions in a single individual and the emotions each individual feels may be different. For example, one person may feel anger and regret at the loss of a loved one while another may experience intense sadness.



Physiological Responses

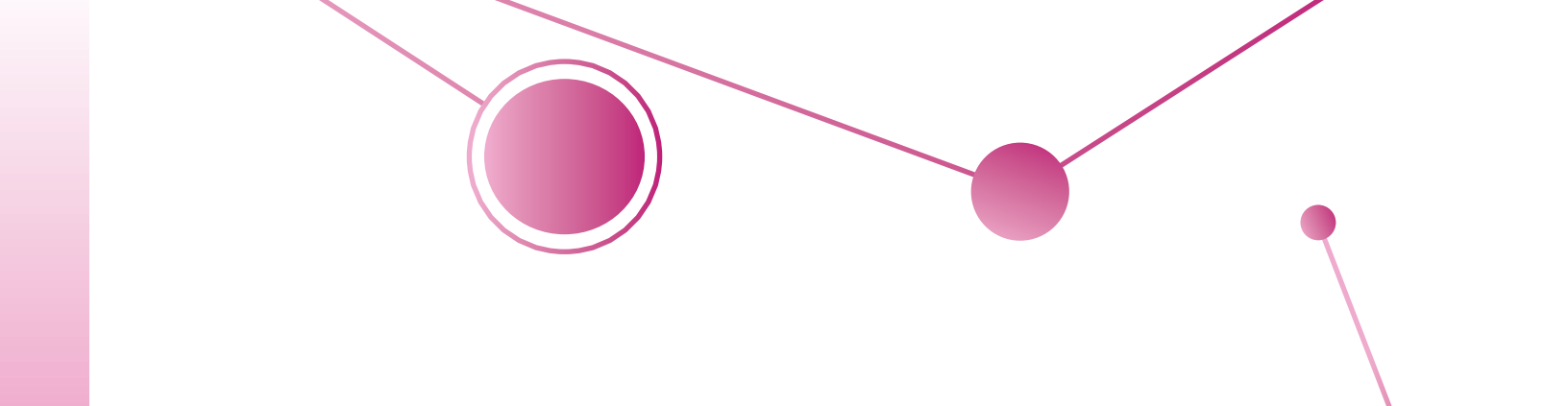
We all know how it feels to have our heart beat fast with fear. This physiological response is the result of the autonomic nervous system's reaction to the emotion we're experiencing. The autonomic nervous system controls our involuntary bodily responses and regulates our fight-or-flight response. According to many psychologists, our physiological responses are likely how emotion helped us evolve and survive as humans throughout history.

Interestingly, studies have shown autonomic physiological responses are strongest when a person's facial expressions most closely resemble the expression of the emotion they're experiencing. In other words, facial expressions play an important role in responding accordingly to an emotion in a physical sense.

Behavioral Responses

The behavioral response aspect of the emotional response is the actual expression of the emotion. Behavioral responses can include a smile, a grimace, a laugh or a sigh, along with many other reactions depending on societal norms and personality.

While plentiful research suggests that many facial expressions are universal, such as a frown to indicate sadness, sociocultural norms and individual upbringings play a role in our behavioral responses. For example, how love is expressed is different both from person to person and across cultures.



Behavioral responses are important to signal to others how we're feeling, but research shows that they're also vital to individuals' well-being. A study in the *Journal of Abnormal Psychology* found that while watching negative and positive emotional films, suppression of behavioral responses to emotion had physical effects on the participants. The effects included elevated heart rates. This suggests that expressing behavioral responses to stimuli, both positive and negative, is better for your overall health than holding those responses inside. Thus, there are benefits of smiling, laughing and expressing negative emotions in a healthy way.

The physiological and behavioral responses associated with emotions illustrate that emotion is much more than a mental state. Emotion affects our whole demeanor and our health. Furthermore, our ability to understand others' behavioral responses plays a huge role in our emotional intelligence, which will be discussed in more detail later.



EMOTIONS AND PSYCHOLOGY

Theories and hypotheses about emotions date back centuries. In fact, basic or primary emotions are referenced in the *Book of Rights*, a first-century Chinese encyclopedia. Emotion is much harder to measure and properly define than many other human responses. Much of the study that has been done in emotional psychology is about basic emotions, our psychological and behavioral responses, and the role of emotional intelligence in our lives.

Basic and Complex Emotions

In emotional psychology, emotions are split into two groups: basic and complex.

Basic emotions are associated with recognizable facial expressions and tend to happen automatically. Charles Darwin was the first to suggest that emotion-induced facial expressions are universal. This suggestion was a centerpiece idea to his theory of evolution, implying that emotions and their expressions were biological and adaptive. In fact, emotions have been observed in animals by researchers for several years, suggesting that they're pivotal to survival in other species as well. Basic emotions are likely to have played a role in our survival throughout human evolution, signaling to those around us to react accordingly.

Emotional psychologist Paul Ekman identified six basic emotions that could be interpreted through facial expressions. They included happiness, sadness, fear, anger, surprise and disgust. He expanded

the list in 1999 to also include embarrassment, excitement, contempt, shame, pride, satisfaction and amusement, though those additions have not been widely adapted.

the six basic emotions

Sadness | Happiness | Fear | Anger | Surprise | Disgust

Similarly, in the 1980s, psychologist Robert Plutchik identified eight basic emotions which he grouped into pairs of opposites, including joy and sadness, anger and fear, trust and disgust, and surprise and anticipation. This classification is known as a wheel of emotions and can be compared to a color wheel in that certain emotions mixed together can create new complex emotions.





More recently, a new study from the Institute of Neuroscience and Psychology at the University of Glasgow in 2014 found that instead of six, there may only be four easily recognizable basic emotions. The study discovered that anger and disgust shared similar facial expressions, as did surprise and fear. This suggests that the differences between those emotions are sociologically-based and not biologically-based. Despite all the conflicting research and adaptations, most research acknowledge that there are a set of universal basic emotions with recognizable facial features.

Complex emotions have differing appearances and may not be as easily recognizable, such as grief, jealousy or regret. Complex emotions are defined as “any emotion that is an aggregate of two or more others.” The APA uses the example of hate being a fusion of fear, anger and disgust. Basic emotions, on the other hand, are unmixed and innate. Other complex emotions include love, embarrassment, envy, gratitude, guilt, pride, and worry, among many others.

Complex emotions vary greatly in how they appear on a person’s face and don’t have easily recognizable expressions. Grief looks quite different between cultures and individuals. Some complex emotions, such as jealousy, may have no accompanying facial expression at all.



THEORIES OF EMOTION

As we've explored, emotion is multifaceted and debatable. Thus, many theories of emotion exist. While some theories directly refute others, many build upon each other. Here are some common theories of emotional psychology that have helped shape the field and how humans view emotions.

James-Lange Theory

The James-Lange Theory of Emotion is one of the earliest emotion theories of modern psychology. Developed by William James and Carl Lange in the 19th century, the theory hypothesizes that physiological stimuli (arousal) causes the autonomic nervous system to react which in turn causes individuals to experience emotion. The reactions of the nervous system could include a fast heartbeat, tensed muscles, sweating and more. According to this theory, the physiological response comes before the emotional behavior. Over time, the James-Lange theory has been challenged, as well as expanded upon in other theories, suggesting that emotion is the mix of physiological and psychological response.





Facial-Feedback Theory

The Facial-Feedback Theory of Emotion suggests that facial expressions are crucial to experiencing emotion. This theory is connected to the work of Charles Darwin and William James that hypothesized that facial expressions impact emotion as opposed to their being a response to an emotion. This theory holds that emotions are directly tied to physical changes in the facial muscles. Thus, someone who forced himself to smile would be happier than someone who wore a frown.

Cannon-Bard Theory

Developed by Walter Cannon and Philip Bard in the 1920s, the Cannon-Bard Theory of Emotion was developed to refute the James-Lange theory. This theory posits that bodily changes and emotions occur simultaneously instead of one right after the other. This theory is backed by neurobiological science that says that the once a stimulating event is detected, the information is relayed to both the amygdala and the brain cortex at the same time. If this holds true, arousal and emotion are a simultaneous event.





Schachter-Singer Theory

This theory, developed by Stanley Schachter and Jerome E. Singer, introduces the element of reasoning into the process of emotion. The theory hypothesizes that when we experience an event that causes physiological arousal, we try to find a reason for the arousal. Then, we experience the emotion.



Cognitive Appraisal Theory

Richard Lazarus pioneered this theory of emotion. According to the Cognitive Appraisal Theory, thinking must occur before experiencing emotion. Thus, a person would first experience a stimulus, think, and then simultaneously experience a physiological response and the emotion.



These are far from the only theories of emotion that exist, but they provide great examples of how the ideas about how emotion is generated differ from each other. What all theories of emotion have in common is the idea that an emotion is based off some sort of personally significant stimulus or experience, prompting a biological and psychological reaction.

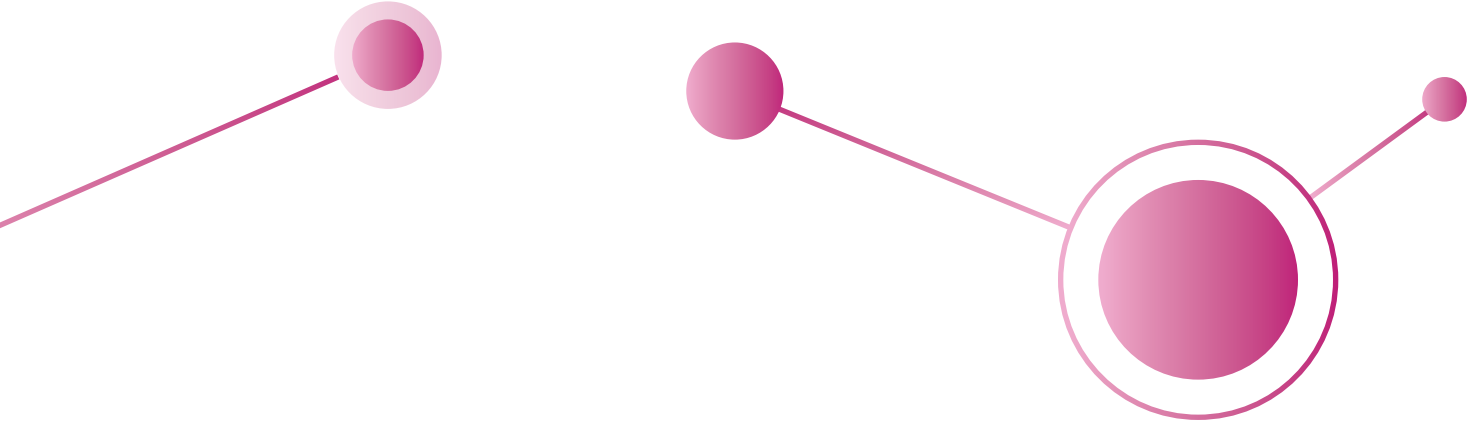


BENEFITS OF UNDERSTANDING EMOTIONS

As discussed, emotions have helped humans evolve and survive. According to Ekman, who developed the wheel of emotion, “It would be very dangerous if we didn’t have emotions. It would also be a very dull life. Because, basically, our emotions drive us — excitement, pleasure, even anger.” That is why it’s important that we’re able to understand emotions as they play such an important role in how we behave.

Ekman argues that emotions are fundamentally constructive. They are influenced by what is good for our species overall and what we learned during our upbringing. They guide our behavior in a way that should lead us to a positive outcome. However, emotions can become destructive if the emotions we’ve learned are the correct response no longer fit our situation, or if subconscious emotions cause reactions that we are unable to understand. Being in touch with your emotions and turning your understanding into action is called emotional awareness. Being able to do this with others as well is referred to as emotional intelligence.

Emotional intelligence is the ability to perceive, control and evaluate emotions. The term was first coined by researchers Peter Salovey and John D. Mayer and found popularity through Dan Goleman’s 1996 book. They define it as the ability to recognize, understand and manage our own emotions as well as recognize, understand and influence those of others. The study of emotional intelligence has gained much popularity since the mid-1990s, with business professionals, relationship coaches and more using the term to encourage others



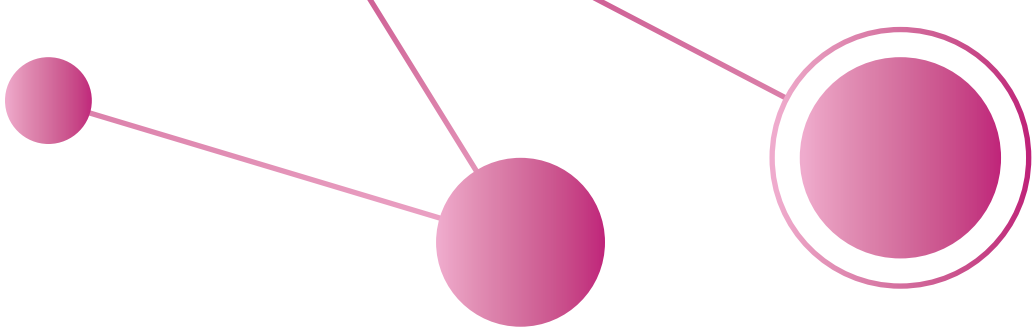
to improve their lives. Many researchers believe that emotional intelligence can be improved over time, while some argue that it's a trait we're born with or without.

The components of emotional intelligence include:

- **Appraising and expressing emotions in the self and others:** Recognizing or expressing verbal or nonverbal cues about emotion
- **Regulating emotion in the self and others:** Managing emotions so that all parties are motivated towards a positive outcome.
- **Using emotions in adaptive ways:** Using emotion and the interpretation of emotions to result in positive outcomes.

Those who have emotional intelligence open themselves to positive and negative emotional experiences, identify the emotions and communicate those emotions appropriately. Emotionally intelligent people can use their understanding of their emotions and the emotions of others to move toward personal and social growth. Those with low emotional intelligence may be unable to understand and control their emotions or those of others. This could leave others feeling badly when they don't understand their emotions, feelings, or expressions.

Clearly, there are personal and professional benefits to improving your emotional intelligence. In Forbes, Co-Chair of Nobel Peace prize-nominated campaign and New York Times best-selling author Chade-Meng Tan addressed the benefits of improving emotional intelligence. He pointed out that high emotional intelligence correlates with better work performance, makes people better leaders and creates the conditions for personal happiness. He stated, "There



are also compelling personal benefits, and the most basic of those occur in three categories: calmness and clarity of mind, resilience and more satisfying relationships.”

Emotional intelligence plays a role in overall success much like traditional intelligence. In fact, some researchers argue that it plays a bigger role. In his 1995 book “Emotional Intelligence: Why It Can Matter More Than IQ,” psychologist Daniel Goleman introduced the idea of an EQ. Much like an IQ, an EQ is a measurement for individuals’ emotional intelligence aptitude. Goleman argues that EQ counts twice as much as IQ and technical skills combined when it comes to becoming successful.

Whether or not that is true is certainly debatable, but emotional intelligence has served humans well throughout our evolution and history. It played a role long before it was officially defined, and likely will for years to come.



THE FUTURE OF EMOTIONAL PSYCHOLOGY

While numerous studies and robust research about emotions has already been done, the field of emotional psychology undoubtedly has an exciting future. From artificial intelligence to new challenges to long-held theories, there's no telling what our understanding of humans and their emotional responses will be.

If you want to join the ranks of those studying emotions, consider an [online bachelor's degree in psychology](#). A bachelor's degree from the University of West Alabama will give you a foundation in experimental design and data analysis.

Already have a bachelor's degree? Further your psychology career with an [online masters in experimental psychology](#). Our experienced faculty have Ph.D.s in diverse areas of experimental psychology. The connections you make and the skills you learn will prepare you for employment in the field or further study.

Earn your degree entirely online at one of the state's most affordable institutions. Our culturally and intellectually diverse institution and flexible structure allow you to challenge yourself while still fitting education into your busy lifestyle. We proudly provide all our students with personal support from application to graduation.