

THE STUDY OF EMOTIONS IN LINGUISTICS AND COGNITIVE SCIENCE

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Abstract

Emotions have become one of the central topics of interdisciplinary research, attracting increasing attention from linguistics, cognitive science, psychology, neuroscience, and artificial intelligence. This article examines the major theoretical approaches to the study of emotions from linguistic and cognitive perspectives. It discusses the conceptualization of emotions, their linguistic representation, and their role in human cognition and communication. Particular attention is given to the universalist and relativist approaches to emotion, theories of basic emotions, conceptual metaphor, and the cognitive mechanisms underlying emotional language. The findings contribute to a better understanding of the relationship between language, cognition, and emotion and emphasize the importance of interdisciplinary approaches in modern emotion studies.

Key words

emotions, cognitive and cultural phenomena, conceptualization, linguistic behavior, lexical, semantic, pragmatic and discourse levels, metaphor, emotional concept, cognitive science, sentiment analysis, physiological component, prototypical emotion.

ИССЛЕДОВАНИЕ ЭМОЦИЙ В ЛИНГВИСТИКЕ И КОГНИТИВНОЙ НАУКЕ

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Аннотация

Эмоции стали одной из центральных тем междисциплинарных исследований, привлекая всё большее внимание со стороны лингвистики, когнитивной науки, психологии, нейронауки и искусственного интеллекта. В данной статье рассматриваются основные теоретические подходы к изучению эмоций с лингвистической и когнитивной точек зрения. Анализируются концептуализация эмоций, их языковая репрезентация, а также их роль в человеческом мышлении и коммуникации. Особое внимание уделяется универсалистскому и релятивистскому подходам к изучению эмоций, теориям базовых эмоций, концептуальной метафоре и когнитивным механизмам, лежащим в основе эмоционального языка. Полученные результаты способствуют более глубокому пониманию взаимосвязи языка, мышления и эмоций, а также подчёркивают важность междисциплинарного подхода в современных исследованиях эмоций.

Ключевые слова

эмоции, когнитивные и культурные феномены, концептуализация, языковое поведение, лексический, семантический, прагматический и дискурсивный уровни, метафора, эмоциональный концепт, когнитивная наука, анализ тональности, физиологический компонент, прототипическая эмоция.

INTRODUCTION

Emotions are an integral part of human cognition, communication, and social interaction. They influence the way individuals perceive the world, process information, make decisions, and express their thoughts through language. As a result, the study of emotions has become one of the most significant interdisciplinary research areas, bringing together insights from linguistics, cognitive science, psychology, neuroscience, philosophy, and artificial intelligence. Contemporary research increasingly recognizes that emotions are not merely psychological states but also cognitive and cultural phenomena that shape human conceptualization and linguistic behavior. Within linguistics, emotions are examined through the lexical, semantic, pragmatic and discourse levels of language. Researchers investigate how emotions are encoded in words, idioms, metaphors, grammatical structures, and communicative strategies.

Cognitive linguistics, in particular, views emotions as conceptual structures that emerge from human experience and are reflected in language. Emotional concepts such as anger, fear, joy, and love are understood not only as lexical categories but also as culturally and cognitively organized mental representations.

Consequently, the linguistic expression of emotions provides valuable insights into how people conceptualize and interpret their emotional experiences.

From the perspective of cognitive science, emotions are closely interconnected with perception, memory, attention, reasoning, and decision-making. Rather than being separate from cognition, emotions actively influence cognitive processes by directing attention, facilitating learning, and guiding adaptive behavior. Advances in neuroscience have further demonstrated that emotional and cognitive systems operate through highly integrated neural networks, emphasizing the inseparable relationship between emotion and cognition.

LITERATURE ANALYSIS AND METHODS

One of the central issues in emotion research concerns the relationship between biological universality and cultural specificity. Universalist theories, represented by scholars such as Paul Ekman and Carroll E. Izard, argue that basic emotions are biologically determined and universally recognized across cultures. In contrast, relativist and constructionist approaches maintain that emotions are shaped by cultural norms, social practices, and language, resulting in culturally specific emotional concepts and patterns of expression. This theoretical debate has significantly influenced linguistic and cognitive investigations of emotions.

Recent developments in computational linguistics and artificial intelligence have further expanded the scope of emotion research. Emotion recognition, sentiment analysis, affective computing, and Natural Language Processing (NLP) increasingly rely on linguistic and cognitive theories to model emotional meaning in human communication. These applications demonstrate that understanding emotional language is essential not only for theoretical research but also for the development of intelligent human-computer interaction.

The purpose of this article is to examine the major approaches to the study of emotions in linguistics and cognitive science, highlighting their theoretical foundations, key concepts, and interdisciplinary significance. Special attention is paid to the conceptualization of emotions, their linguistic representation, cognitive mechanisms, and cross-cultural variation. By integrating findings from linguistics, cognitive science, psychology, and related disciplines, this paper aims to provide a comprehensive overview of contemporary emotion research and to emphasize the central role of emotions in human language and cognition. Undoubtedly, emotions constitute an interdisciplinary field of study. They encompass feelings and subjective experience, physiology and behavior, as well as processes of cognition and conceptualization [Ортони 1996, 314]. Emotions motivate, regulate, and direct perception, cognitive activity, and physical behavior [Изард, 2012], while also providing meaning to the events people experience [Мацумото, 2003]. Interest in

investigating various aspects of the emotional dimension of humans and animals continues to grow, driven by advances in neuroscience [Cacioppo, Gardner, 1999] and by the increasing incorporation of emotions into the fields of computer science, artificial intelligence, and Natural Language Processing [Nakayama, 2004].

Despite the coexistence of various approaches to the definition and classification of emotions (from the Latin *emovere* - "to excite" or "to move") in linguistics, psychology, neurobiology, endocrinology, medicine, history, sociology, and even computer science, two major theoretical approaches can be distinguished. These are known as the universalist and relativist approaches. The universalist approach assumes that, due to their biological basis, emotions are universal across all cultures. In contrast, the relativist approach views emotions as constructs shaped by local cultures and, therefore, as unique cultural phenomena. Among the proponents of universalism are Paul Ekman, Carroll E. Izard, and Charlotte Buhler, whereas Michelle Rosaldo and Catherine Lutz are commonly regarded as representatives of the relativist perspective. The most radical form of the universalist approach is the absolutist position, while the most extreme version of the relativist approach is the axiomatic position.

From the standpoint of the relativist approach, also referred to as the functionalist approach, emotions are understood as social scripts or socially constructed phenomena that encompass subjective, behavioral, and physiological components and are acquired through the internalization of cultural norms. According to this view, culture shapes emotions, which in turn reflect the cultural environment in which they arise. Consequently, emotions are not biologically fixed or identical across all human societies but are culturally conditioned and socially constructed (the social model of emotions).

The Differential Emotions Theory maintains that basic emotions are biologically determined emotional responses whose expression and recognition are universal across individuals regardless of their ethnic or cultural background [Ekman, 2007].

A distinction is made between basic emotions (such as disgust and anger) and social emotions (such as guilt, pride, and shame), which emerge later than basic emotions in both ontogenetic and phylogenetic development [Aamodt, Wang, 2008].

One of the most influential studies on the identification of basic emotions was conducted by Paul Ekman and his colleagues in 1972. As a result of this research, they identified six emotions that are universal across cultures: anger, disgust, fear, joy (happiness), sadness, and surprise. Ekman described a set of characteristic features for each of these emotions, noting that although these emotions are

universal, the degree to which they are expressed may vary across individuals and cultures according to display rules [Ekman, 1992].

In the 1990s, Ekman proposed expanding the set of basic emotions by including several additional positive and negative emotions, some of which cannot be reliably identified solely through facial expressions. These additional emotions included amusement, contempt, contentment, embarrassment, excitement, guilt, pride in achievement, relief, satisfaction, sensory pleasure, and shame (Ekman, 1992).

Silvan S. Tomkins identified eight basic emotions: surprise, interest, joy, rage, fear, disgust, shame, and anguish [Tomkins, 1963]. In accordance with his Differential Emotions Scale, Carroll E. Izard distinguished twelve discrete emotions: interest-excitement, joy, surprise, sadness (grief-distress), anger, disgust, contempt, fear, shame, guilt, shyness, and self-hostility [Izard et al., 1993].

According to Izard, complex emotions, such as love, hostility, and anxiety, arise through combinations of these basic emotions. Among the defining characteristics of basic emotions, Izard (2012) identifies the following: the presence of specific neural substrates; expression through distinct facial expressions accompanied by a consciously experienced subjective feeling; and an evolutionary and biological foundation, having developed to facilitate human adaptation.

Thus, according to Izard, only those emotions that have deep phylogenetic roots and are found not only in humans but also in animals can be regarded as basic emotions. Emotions that are unique to humans, such as shame and guilt, do not belong to this category (Izard, 2012; 137).

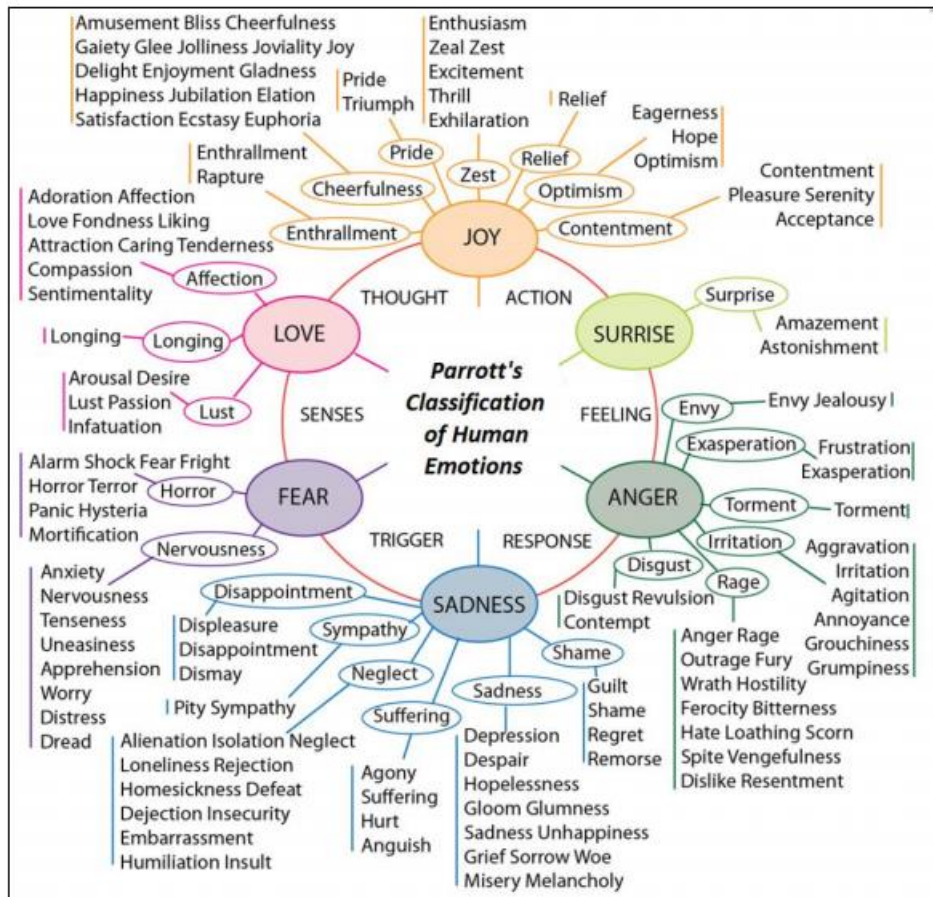


Figure 1. W. Parrott's Classification of Emotions

According to the findings of Fontaine, Poortinga, Setiadi, and Markam, the most prototypical emotions in Indonesia are happiness, love, joy, sadness, and hatred, whereas in the Netherlands the most prototypical emotions are joy, sadness, anger, and rage. These findings suggest that although certain emotions may be universally recognized, their salience and prototypicality may vary across cultures. In 2001, W. Gerrod Parrott proposed a hierarchical (tree-like) classification of emotions, consisting of primary, secondary, and tertiary emotions [Parrott, 2001].

At the highest level of the hierarchy, he identified six primary emotions: *love*, *joy*, *surprise*, *anger*, *sadness*, and *fear*. Each of these primary emotions branches into a number of secondary and tertiary emotions, forming a comprehensive taxonomy that includes more than one hundred distinct emotional states (see Fig. 1). This hierarchical model demonstrates that emotions are organized in a structured system, where broad emotional categories encompass increasingly specific affective experiences.

In linguistics, researchers examine conceptual fields of emotions, which consist of semantically related lexical units representing different aspects and degrees of a particular emotion. For example, the conceptual field of anger includes the following lexical items: rage, outrage, fury, hysteria, wrath, hate, anger,

indignation, heat, malice, spite, irritation, irritability, exasperation, outbreak, explosion, virulence, resentment, gall, grudge, pique, annoyance, and displeasure. The conceptual field of delight comprises such concepts as *delight, pleasure, happiness, amusement, satisfaction, comfort, pride, love, great respect, peace of mind, curiosity, a happy adventure, charm, and intrigue*. Similarly, the conceptual field of affection (attachment) includes attachment, love, attraction, infatuation, being in love, inclination, passion, partiality, attachment, obsession, sympathy, favor, goodwill, benevolence, kindness, and romantic love (amour) (ЛЮБОВА, 2015). In psychology and philosophy, scholars often distinguish between such concepts as emotions, affects, sensations, and feelings (e.g., Carl Jung, Immanuel Kant, Baruch Spinoza, and G. W. F. Hegel). Emotions differ from reflexes in that they involve cognitive appraisal; for example, surprise is an emotion, whereas the involuntary startle response is a reflex. Emotions also differ from moods and personality traits in that they are relatively short-lived and are triggered by specific circumstances. For instance, being irritated is a temporary emotional state, whereas being grumpy is considered a more stable personality characteristic. Furthermore, emotions differ from sensations in that they are less directly related to bodily states. Thus, emotions such as anger, sadness, happiness, and fear are distinguished from sensations such as hunger, drowsiness, pain, and thirst.

Moreover, within any group of related emotions, it is possible to identify different degrees of intensity. For example, the emotional continuum may range from annoyance to irritation, anger, rage, and fury. Researchers also distinguish between simple emotions and complex or compound emotions. While emotions such as sadness and anger are regarded as simple emotions, emotional states such as nostalgia or love-hate feelings represent combinations of multiple emotions. In addition, emotions differ in terms of the number of obligatory participants involved in the emotional situation. For example, the statement "*I am sad*" involves only the experiencer, whereas "*I love you*" requires both the experiencer and the object of affection. A more complex emotional scenario, such as "*I am jealous because you are flirting with him,*" involves multiple participants and interpersonal relationships [Boster, 2005].

RESULTS

The study of emotions has evolved into one of the most important interdisciplinary fields, integrating perspectives from linguistics, cognitive science, psychology, neuroscience, philosophy, and artificial intelligence. Contemporary research demonstrates that emotions are not merely subjective psychological experiences but also fundamental cognitive mechanisms that influence perception, conceptualization, reasoning, decision-making, and communication.

CONCLUSION

From a linguistic perspective, emotions are reflected through lexical choices, metaphorical expressions, phraseological units, grammatical structures, and discourse strategies, revealing how speakers conceptualize and communicate their emotional experiences. Cognitive linguistics further explains that emotional concepts are structured within conceptual systems shaped by both embodied experience and cultural knowledge. Consequently, the linguistic representation of emotions provides valuable insights into the interaction between language, cognition, and culture.

The analysis of major theoretical approaches including universalist, relativist, and cognitive perspectives shows that neither biological nor cultural explanations alone are sufficient to account for the complexity of human emotions. Instead, emotions should be understood as dynamic phenomena resulting from the interaction of biological predispositions, cognitive processes, social experience, and cultural context. This interdisciplinary understanding offers a more comprehensive explanation of emotional behavior and its linguistic manifestation.

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