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CREATION METHOD OF CITY VEHICLE MOBILE MODE ON NORMAL MOTION CYCLE

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Abstract
The method used for estimating the fuel economy and ecologic safety performances of the vehicle and for developing regulated city driving cycle, which reflects urban use condition is represented in this article. The driving cycle of Tashkent city, developed on the base of results of experiments on defining driving modes of vehicles in Tashkent is significant for increasing energy efficiency of passenger cars.

Keywords. Fuel consumption, ecological safety, NEDC.

Introduction

Language is a hallmark of human cognition, enabling complex communication, abstract thought, and cultural evolution. Unlike animal communication systems, human language exhibits unique features that allow for an infinite variety of expressions and the transmission of intricate ideas across generations. This article explores the distinguishing characteristics of human language compared to animal communication systems, focusing on syntax, semantics, generativity, displacement, and cultural transmission. Understanding these differences sheds light on the evolutionary and cognitive processes that have shaped human language.[1]

DISCUSSION AND RESULTS

Characteristics of Human Language

Syntax and Structure

Human language is characterized by its syntactic structure, allowing words to be combined in various ways to form meaningful sentences. Syntax governs the rules for sentence construction, enabling speakers to generate an infinite number of sentences from a finite set of words. This feature is absent in animal communication systems, where signals are typically fixed and lack hierarchical structure.
Example: Hierarchical Structure in Human Language

In human language, a sentence like "The cat chased the mouse" can be expanded to "The cat that was hungry chased the mouse that was hiding," demonstrating hierarchical embedding and complexity.[2]

Semantics and Meaning

Semantics in human language involves the use of symbols to convey specific meanings and abstract concepts. Words represent ideas, objects, or actions, allowing humans to discuss not only concrete realities but also abstract, hypothetical, or future scenarios.

Example: Abstract Concepts in Human Language

Humans can discuss concepts such as justice, freedom, or love, which have no direct physical representation but are understood through shared semantic frameworks.[3]

Generativity and Creativity

The generative nature of human language allows speakers to create novel sentences that have never been uttered before. This creative aspect enables the expression of new ideas, the formulation of questions, and the exploration of imaginative scenarios.

Example: Novel Sentences

A speaker can invent a sentence like "The purple dragon flew over the rainbow to deliver a message to the king," demonstrating creativity and the ability to generate new and unique expressions.

Displacement

Displacement refers to the ability of human language to communicate about things that are not present in the immediate environment, including past and future events, hypothetical situations, and abstract concepts. This capability is rare or absent in animal communication, which tends to be tied to the immediate context or stimuli.[4]

Example: Discussing Past and Future

Humans can talk about historical events, plan future activities, or hypothesize about possible outcomes, such as "If it rains tomorrow, we will cancel the picnic."

Cultural Transmission

Human language is culturally transmitted, meaning it is learned and passed down through social interaction rather than being genetically inherited. This transmission allows for the evolution and diversification of languages over time, reflecting cultural changes and innovations.[5]

Example: Language Evolution

Languages evolve and change through cultural practices, as seen in the development of new words, slang, and dialects that reflect societal shifts and technological advancements.

Characteristics of Animal Communication Systems

Fixed Signals and Limited Flexibility

Animal communication systems often rely on fixed signals with specific meanings, such as calls, gestures, or pheromones. These signals are typically used in specific contexts, such as mating, warning of danger, or establishing territory, and lack the flexibility and generativity of human language.

Example: Bird Songs

Birdsongs are often species-specific and used for particular purposes, such as attracting mates or marking territory, and do not combine to form complex messages or convey abstract ideas.

Lack of Syntax

Animal communication lacks the syntactic rules that characterize human language. Signals are usually not combined to create new meanings, and there is no hierarchical structure governing their arrangement.

Example: Primate Calls

Primate vocalizations can convey emotions or warnings but do not exhibit the recursive and combinatorial properties of human syntax.

Immediate Context

Animal communication is generally tied to the immediate context, with signals corresponding directly to environmental stimuli or specific social interactions. Displacement, the ability to refer to things not present, is largely absent.[6]

Example: Honeybee Dance

The honeybee dance communicates the location of food relative to the hive but cannot refer to food sources that are not currently available or communicate abstract concepts about the hive's future.

Genetic Predisposition

Many animal communication systems are genetically encoded, with specific signals and responses being innate rather than learned through cultural transmission. While some animals can learn new signals, the overall system remains less flexible and culturally adaptive than human language.

Comparative Analysis

Cognitive and Evolutionary Implications

The differences between human language and animal communication systems reflect distinct cognitive and evolutionary processes. Human language's complexity and flexibility suggest a high level of cognitive processing, including memory, learning, and abstraction. These capabilities have likely evolved to support complex social interactions, cooperation, and cultural development.[7]

Implications for Communication Theory

Understanding the distinctions between human language and animal communication informs theories of communication and cognition. It highlights the unique role of language in human development and the importance of symbolic representation and cultural learning in shaping human societies.

CONCLUSION

Human language is distinguished from animal communication systems by its syntactic structure, semantic richness, generative capacity, displacement, and cultural transmission. These features enable humans to communicate complex, abstract, and creative ideas across time and space. In contrast, animal communication systems are typically limited in flexibility, context-dependent, and genetically encoded. The study of these differences enhances our understanding of the cognitive and evolutionary foundations of language and highlights the unique attributes that underpin human communication and culture.

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