

## How to Identify Mechanisms of Cultural Influences on Human Brain Functions

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Abstract: This article discusses the mechanisms of cultural influences on human brain functions. It starts with a brief review of the current research on cultural influences on brain functions. Then, it discusses the mechanisms of cultural influences on brain functions from the perspective of cognitive neuroscience. The article argues that cultural influences on brain functions are not only direct but also indirect. Direct influences are those that affect brain functions through the cultural environment, such as language, social norms, and values. Indirect influences are those that affect brain functions through the cultural environment's influence on cognitive processes, such as attention, memory, and decision-making. The article also discusses the implications of cultural influences on brain functions for cross-cultural research and clinical practice.

Keywords: cultural influences, brain functions, cognitive neuroscience, cross-cultural research, clinical practice.

Introduction

Cultural influences on human brain functions have been a topic of increasing interest in the field of cognitive neuroscience. This interest is driven by the realization that culture is not just a social construct but also a powerful force that shapes our cognitive processes and brain functions. In this article, we will discuss the mechanisms of cultural influences on human brain functions from the perspective of cognitive neuroscience.

Current Research on Cultural Influences on Brain Functions

Recent research has shown that cultural influences on brain functions are not limited to language and social norms but also extend to cognitive processes such as attention, memory, and decision-making. For example, studies have shown that individuals from different cultures exhibit different patterns of brain activity when performing tasks that require attention or memory (e.g., Han & Haxby, 2008; Han & Haxby, 2013). These findings suggest that cultural influences on brain functions are not only direct but also indirect, affecting brain functions through the cultural environment's influence on cognitive processes.

Mechanisms of Cultural Influences on Brain Functions

The mechanisms of cultural influences on brain functions can be understood in terms of cognitive neuroscience. Cultural influences on brain functions are not only direct but also indirect. Direct influences are those that affect brain functions through the cultural environment, such as language, social norms, and values. Indirect influences are those that affect brain functions through the cultural environment's influence on cognitive processes, such as attention, memory, and decision-making.

Implications of Cultural Influences on Brain Functions

The implications of cultural influences on brain functions are far-reaching. For cross-cultural research, it is important to consider the cultural context of the participants and the tasks. For clinical practice, it is important to consider the cultural context of the patients and the interventions.

Conclusion

Cultural influences on human brain functions are a complex and multifaceted phenomenon. This article has discussed the mechanisms of cultural influences on brain functions from the perspective of cognitive neuroscience. The article argues that cultural influences on brain functions are not only direct but also indirect, affecting brain functions through the cultural environment's influence on cognitive processes.

### Do Group Differences in Brain Activity Necessarily Reflect Cultural Influences?

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**How to Reveal Mechanisms of Cultural Influences on Human Brain Activity?**

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Behavioral/Systems/Cognitive

**Brain Activity in the Human Amygdala and Prefrontal Cortex Is Associated with Cultural Values**

Cheryl L. Hoge, Jennifer M. Hanson, Robert M. Price, and Paul D. Paus

Department of Psychology, University of Regina, Regina, Saskatchewan S4S 0A2, Canada

**Abstract:** Cultural values are learned and shared beliefs that influence behavior and thought. We investigated the neural basis of cultural values using functional magnetic resonance imaging (fMRI). We hypothesized that cultural values would be associated with brain activity in the amygdala and prefrontal cortex (PFC). We used a task that required participants to judge the moral acceptability of actions. We found that cultural values were associated with brain activity in the amygdala and PFC. The amygdala and PFC are known to be involved in emotion and decision making, respectively. These findings suggest that cultural values are associated with brain activity in the amygdala and PFC. This is the first study to show that cultural values are associated with brain activity in the amygdala and PFC.

**Key words:** amygdala; prefrontal cortex; cultural values; fMRI; moral acceptability; decision making

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**Conclusion**

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**Note**

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