THE UNIVERSITY OF CHICAGO

Department of Statistics

MASTER'S THESIS PRESENTATION

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Precuneus and Throwing Accuracy -- From an Evolutionary Perspective

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Jones 304, 5747 S. Ellis Avenue

ABSTRACT

Modern human skulls are more globularized than Neanderthals due to a bulging parietal lobe. Among other regions of the brain, a larger medial parietal structure known as the precuneus, and more specifically, the anterior dorsal precuneus, is believed to be a key contributor to this differential anatomical expansion. Experts believe that the enlarged precuneus has significant implications on early human hunting behaviors, namely spear-throwing. This functional advantage from the expanded precuneus might provide us insights on human evolutionary success compared to close-range hunters like Neanderthals. In this study, researchers used Transcranial Magnetic Stimulation (TMS) to manipulate the precuneus' function and examine the relationship between this brain region and throwing accuracy. Results suggest that the inhibition of the precuneus significantly decreases participants' accuracy scores, but only if their performance falls within the most effective time frame for TMS treatment.

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