

# **The Relationship between Theory of Mind Abilities and Humor Comprehension**

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**Abstract:** According to Howe (2002), humor originates from perceiving the thoughts of the subject of the humor, implying the involvement of perspective-taking or related mental processes. However, how does the ability to infer the mental states of others, or theory of mind (ToM) operate with the comprehension of humor is yet certain. The current research continued to examine this idea using fMRI, hoping to investigate the underlying neural substrates of those with high and low ToM related ability when processing humor. In fMRI, participants read 64 stories, including ToM-funny, ToM-unfunny, nonsensical-funny, and nonsensical-unfunny conditions. Empathy Quotient is used to assess participants' ToM ability. The results revealed a positive correlation between EQ scores and left ACC under the comparison between ToM conditions and nonsensical conditions. The present study advanced the influences of ToM processing and how it involves cognitive processing, such as story reading or joke comprehension.