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Intuitive physics ability in systemizers relies on differential use of the internalizing system and long-term spatial representations

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Abstract

According to the Empathizing-Systemizing theory (E-S Theory), individual differences in how people understand the physical world (systemizing) and the social world (empathizing), are two continuums in the general population with several implications, from vocational interests to skills in the social and physical domains. The underlying mechanisms of intuitive physics performance among individuals with a strong systemizing and weak empathizing (systemizers) are, however, unknown. Our results affirm higher intuitive physics skills in healthy adult systemizers (N=36), and further reveal the brain mechanisms that are characteristic for those individuals in carrying out such tasks. When the participants performed intuitive physics tasks during functional magnetic resonance imaging, combined higher systemizing and lower

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