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An Investigation on the Relationships Among Social Cognition Processes by Eye-Tracking Techniques

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Abstract

The present study integrates four primary social cognition processes Joint Attention(JA), Intention Detection(ID), Perspective Taking(PT), and Social Reference(SR) into lively comic scenarios in order to disentangle their relationships and possible one-to-one connections. By using eye-tracking technique, gaze patterns in terms of Total Fixation Duration were considered as indexes to examine the hypotheses. It is found that PT is positively correlated with JA, ID, and SR whereas JA is positively correlated with ID and PT. As a criteria-related validation, the scores of Geneva Social Cognition Scale(GeSoCS) were used to delineate the gaze performance. Participants with higher score in GeSoCS showed different eye-movement patterns to those with lower score, indicating the pattern of eye movements could be a reliable indicator of social cognition status. Moreover, the correlations revealed in the present study suggest that close connections exist between social cognition processes and eye gaze scanning toward pictorial scenarios.