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Letter to the Editors

Schizotypal personality traits and deception: The role of self-awareness

Dear editors,

Self-awareness is the ability to be aware of one's own thoughts, feelings, and mental states (Keenan et al., 2003). Recent research suggests that self-awareness and self-related stimuli (e.g., self-attributes, self-faces, autobiographical memories) are processed preferentially in the right prefrontal cortex (Keenan et al., 2001; Platek and Gallup, 2002). It has been claimed that there is a direct relationship between self-awareness and Theory of Mind (Gallup, 1982). There may be a relation between Theory of Mind (TOM) and deception such that the two abilities share both similar neurocognitive substrates (Keenan et al., 2003). Researchers have found that deception (Ganis et al., 2003) and TOM (Vogeley et al., 2001) may also be right hemisphere dominant functions.

Schizophrenics have been found to be deficient in tests that involve TOM (Frith and Corcoran, 1996). Since schizophrenics lack TOM, they may lack the ability to deceive as well (Sullivan and Allen, 1999). We therefore predicted that self-awareness may contribute to the ability to manipulate thoughts of another (intentional deception). Furthermore, we predicted possible right hemisphere dominance for self-awareness and deception.

We evaluated 47 college students (7 males and 40 females) recruited through undergraduate psychology classes. Participants completed a series of surveys including the Edinburgh Handedness Inventory, the public and private Self-Consciousness Scale (SCS) and the Schizotypal Personality Questionnaire (SPQ).

Participants also completed a computer card task. They were given a hand of cards consisting of five cards. Following initial card exposure, the participants were told to complete four card trials. For two of the trials, participants were asked to deceive and for the other two they were asked to be truthful with both the left and right hands.

For the deception trials, participants were randomly assigned to one of two conditions; 'fake good' or 'fake bad'. Faking good consisted of pretending that the cards the participant possessed were better than they actually were in standard poker terms; faking bad meant the opposite. Images of typical playing cards were randomly presented via a computer to the left or right visual field. The participants were asked to respond via keystroke, whether or not they had the card that appeared.

A significant correlation was found between the Edinburgh and the private SCS subscale ($r(45)=-0.29$, $p<0.05$). There was also a trend for a significant correlation between the public SCS and the Edinburgh ($r(45)=-0.27$, $p<0.05$). These data indicated that as participants become more left-handed, self-awareness increased. Though not significant ($r(45)=0.20$, $p>0.05$), the positive correlation between Edinburgh and the SPQ also indicated that the more left-handed a participant was, the higher his/her self-awareness.

There was a significant correlation between hand and condition (Truth or Deception) reaction times and self-awareness. The private SCS subscale correlated significantly with trials in which the subjects had to deceive, information was presented to the left visual field ($r(45)=0.31$, $p<0.05$) and the right visual field ($r(45)=0.32$, $p<0.05$), but only when responses were made with the left hand. This indicated that the overall effect was due to hand. There was a correlation between the private SCS and the left hand for deception trials ($r(45)=0.32$, $p<0.03$). There were no other correlations with any of the deception trials. There was also a significant correlation between right-hand performance and self-awareness on the trials in which the participants were truthful. For both the LVF ($r(45)=0.40$, $p<0.006$) and the RVF ($r(45)=0.30$, $p<0.04$), the SPQ was correlated with reaction time.

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These data indicate a possible relationship between deception and the right hemisphere, providing further evidence for a right lateralized dominance in deception. Further, it appears that self-awareness is correlated with deception performance. These factors may all be related to TOM, though such a relationship was not directly tested (but see Malcolm and Keenan, 2003). Further research should examine these factors in disorders of self including schizotypal affective disorder and schizophrenia.

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