Results by Maher et al. (1987) and Spitzer (1993) suggest that patients with schizophrenia with formal thought disorder share a problem in the automatic processing of associations. This has been modeled as an abnormal speed of spreading activation among nodes within semantic networks. Disorganized thinking, tangential speech, and associative loosening are viewed as resulting from this disinhibition. Evidence for this theory has been mainly derived from semantic priming studies. We were able to replicate Spitzer's initial findings in several studies (Moritz et al., 2001a; Moritz et al., 2001b; Moritz et al., 2003) and also demonstrated that (a) abnormalities are detectable in individuals scoring high on schizotypy (Moritz et al., 1999) and (b) effects are not confined to lexical decision tasks. A study in patients with bipolar disorder provided tentative evidence that disinhibited semantic activation might be specific to disorganized thinking in schizophrenia (Andreou et al., 2013).

Moreover, in a computerized priming procedure, we found that formal thought-disordered patients with schizophrenia prefer the inferior meaning of homographs (e.g., bank: money (superior) vs. river (inferior)) relative to psychiatric controls and healthy subjects (Moritz et al., 2001a; for a pilot study, see Moritz et al., 2001c). Using masked repetition priming, we again found a large positive semantic priming effect in formal thought-disordered patients with schizophrenia (Wentura et al., 2008).

Research Team

- PD Dr. Christina Andreou
- Prof. Dr. Steffen Moritz
- Dr. Todd S. Woodward (University of British Columbia and Riverview Hospital, Vancouver, Canada)

Cooperating Partners

- Dr. Christian Frings (Department of Psychology, Saarbrücken, Germany)
- Dr. Daniela Roesch-Ely (Hospital for Psychiatry, Heidelberg, Germany)
- Prof. Dr. Dr. Manfred Spitzer (Hospital for Psychiatry and Psychotherapy, Ulm, Germany)
- Dr. Matthias Weisbrod (Hospital for Psychiatry, Heidelberg, Germany)
- Prof. Dirk Wentura (Department of Psychology, Saarbrücken, Germany)

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