

Psychopathologies of Social Cognition: Linking Neural, Cognitive and Clinical Perspectives

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Overview

Social cognition encompasses the processing of affective and cognitive mental states of self and other. A number of psychopathologies have now been linked to abnormalities of social cognition prompting questions about interactions and dissociations within the sociocognitive domain and highlighting gaps in the literature. This symposium begins with an overview of historical beginnings, theoretical accounts and questions concerning neural underpinnings. Individual speakers will then focus on different psychopathologies to present reviews and some new empirical data to address unresolved issues, highlight new directions and offer cautionary notes concerning the conduct of social cognition research in clinical populations.

06-01

Emotion regulation in affective and nonaffective psychoses

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Background: Emotion regulation involves the cognitive manipulation of subjective and physiological experiences of emotion. Recent neuroimaging studies implicate distinct patterns of prefrontal cortical inhibition of subcortical regions in association with particular cognitive regulatory strategies, alongside modulation of autonomic responses associated with various forms of negative affect. The use of maladaptive cognitive regulatory mechanisms is associated with altered neural activity in healthy individuals and increased negative affect in healthy and clinical populations.

Methods: The role of emotion dysregulation in the development and maintenance of affective and psychotic symptoms is considered from a cognitive neuroscience perspective. Neuropsychological and social-cognitive processes involved in emotion regulation are discussed in the context of neural mechanisms of cognitive con-

trol and emotion processing in healthy individuals. The symptoms of affective (bipolar, schizoaffective) and nonaffective (schizophrenia) psychotic disorders are considered as manifestations of emotion dysregulation according to known neuropsychological and social processing deficits, and clinical neuropathology.

Results: Emotion regulation relies on synergy within bidirectional fronto-striatal-thalamic and brainstem networks involved in emotion perception, affect generation and control of the autonomic nervous system. Convergent evidence from cognitive neuropsychological and neurobiological investigations in affective and nonaffective psychoses implicates differential dysfunction in these neural systems supporting the cognitive regulation of emotion.

Conclusions: The cognitive control of emotion may be disrupted by abnormalities in cognitive and/or neural processes subserving social perception, affect generation or regulation. Consideration of the neuropsychological and social-cognitive profiles of affective and nonaffective psychoses alongside regional neuropathology suggests the existence of distinct patterns of emotion dysregulation in these conditions.

06-02

Processing and responding to social stimuli in borderline personality disorder: a selective review

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Background: Dysfunction in emotional systems has long been emphasized in the theories of borderline personality disorder (BPD); however, there has been a paucity of research exploring the relationship between emotion dysfunction and social functioning in this disorder.

Methods: This paper reports a selective review of the literature on processing and responding to social stimuli in BPD. The paper begins with a general review of the role of emotion and social behaviour in psychopathology and then focuses more specifically on research in various domains of social cognition and attention in BPD. The neuroanatomical regions that have been implicated in studies of social cognition and BPD are also discussed.

Results: The integration of results from studies of emotional, neurocognitive and social dysfunctions in BPD can help to identify potential origins and social consequences of BPD and define the way in which various social functions of emotion processing are shaped

in this disorder. A gap in the literature concerning early stages of the disorder is identified.

Conclusions: The observed emotional features of BPD have important negative consequences for daily life functioning. Studies of social cognition in BPD can help to better identify the key factors underpinning these emotional disturbances in BPD. More research is needed, however, in the early stages of the disorder, prior to the effects of chronic stress and recurrent mental state pathology associated with adult forms of BPD, to better evaluate the primacy and core nature of social cognition impairments in BPD.

06-03

What is the evidence that social cognition deficits in schizophrenia represent a vulnerability marker?

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Background: Patients with schizophrenia are observed to have marked deficits across several social cognition domains including theory of mind (TOM), social perception and emotion processing. These deficits are observed at illness onset (TOM, Polowsky et al. 2002) and across illness phase (TOM, Janssen et al. 2003), and differ in presentation from those observed in other diagnostic groups (eg depression, Garety & Freeman 1999; affective disorder, Loughland et al. 2002), suggesting they may represent a trait marker for the disorder. The aim of this paper was to review current findings with regard to social cognition deficits in schizophrenia and to examine the evidence that these deficits may represent a vulnerability marker.

Method: A narrative review of the research literature was undertaken and supplemented with the current research findings of the author that investigate emotion-processing deficits in people with schizophrenia, first-degree relatives, affective disorder and healthy non-psychiatric controls.

Results: Findings from TOM, social context and emotion processing provide evidence that healthy first-degree relatives and other at-risk groups show similar, but less severe, social cognition deficits to those observed in schizophrenia (Cornblatt & Keilp 1994; Frenkel et al. 1995; Toomey et al. 1999; Loughland et al. 2004).

Conclusions: The results support the notion of a social cognition vulnerability marker for schizophrenia disorder. Differential patterns of performance on social cognition tasks may help detect those potentially

at risk of developing schizophrenia and provide a potential method for developing endophenotypes for examining diagnostic, genetic and therapeutic issues in schizophrenia.

06-04

Social cognition in nonforensic psychopathy: further evidence for a dissociation between intact 'theory of mind' and impaired emotion processing

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Background: Psychopathy is a developmental disorder characterized by antisocial behaviour identified in forensic settings using the Psychopathy Checklist-Revised (PCL-R; Hare 1991). Forensic psychopaths, like autistic individuals, show social cognition abnormalities linked to amygdala dysfunction (eg impaired recognition of negative affect). These developmental disorders differ, however, with respect to theory of mind (ToM); while psychopaths are adept at imputing others' causal mental states (intentions/beliefs), ToM deficits characterize autism. In line with recent research that has used nonforensic groups to further examine the dissociation of sociocognitive skills in psychopathy, this study investigated conscious and preconscious processing of facial affect, ToM and empathy in a university sample assessed for psychopathic traits using the Self Report Psychopathy Scale III (SRP-III; Paulhus et al. in press), an instrument styled on the PCL-R.

Method: About 416 university students completed the SRP-III. Sixty individuals with high (>75 percentile), medium (40–60 percentile) and low (<25 percentile) psychopathic tendencies (20 per group) were then called back for experimental testing. Tasks assessed facial affect recognition, affective priming (using subliminally presented facial expressions) and ToM. The Emotional Empathy Questionnaire (Mehrabian & Epstein 1972) was also administered.

Results: While groups did not differ in their ToM abilities, psychopathic tendencies were associated with poor recognition of negative affect (eg disgust), an absence of affective priming and reduced empathy.

Conclusions: Nonforensic and forensic psychopaths appear alike; these individuals know how others