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Consciousness and the social mind

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Abstract

Phenomenal consciousness and social cognition are interlocking capacities, but the relations between them have yet to be systematically investigated. In this paper, I begin to develop a theoretical and empirical framework for such an investigation. I begin by describing the phenomenon known as social pain: the affect associated with the perception of actual or potential damage to one's interpersonal relations. I then adduce a related phenomenon known as affective contagion: the tendency for emotions, moods, and other affective states to spread from person to person in social contexts. Experimental studies of these two phenomena suggest that affective consciousness depends on perception of the social world in much the same way that it depends on perception of the body – in short, that consciousness is 'socially embodied'. In the second part of the paper I argue that the distinctive sociality of our species, especially its moral dimension, rests heavily on our ability to represent the conscious states of others. In closing, I put these ideas together and show how they point to a circular causal-mechanistic nexus between consciousness and social mindedness.

Keywords: Consciousness; Emotion; Social cognition; Social pain; Embodiment; Mindreading; Moral cognition

1. Introduction

Emotion is a hot topic, getting hotter all the time. The reasons for this enthusiasm are various, but the growth of neuroscientific interest in the area surely ranks high among them. The same goes for another hot topic: social cognition. Within the last two decades, two subfields of neuroscience have emerged: affective neuroscience, the study of the neural mechanisms underlying emotion and emotional feeling; and social neuroscience, the study of the neural mechanisms underlying social cognition. The parallel development of these new brain sciences is no accident. As Damasio (1994) makes clear, emotional and social functioning are deeply intertwined, since practical rationality is scaffolded by the ability to feel one's way through the world, the social world included. This is now a familiar theme in cognitive science. Less familiar is the idea that the link between emotional and social functioning identified by Damasio forms part of a constellation of connections between consciousness (in the phenomenal, 'what it's like' sense; see Nagel, 1974) and social cognition. In this paper, I try to identify some of these other connections, and to explore their implications for how we think about the conscious mind in general.

The plan of the paper goes like this. In the first part, I argue that a wide swath of consciousness is a product of the social mind, as it arises from cognitive operations dedicated to processing information about the domain of persons. I begin by describing two phenomena that have attracted considerable attention in the empirical literature. The first is social pain: the affect associated with the perception of actual or potential damage to one's interpersonal relations. The second phenomenon of interest is affective contagion: the tendency for emotions, moods, and other affective states to spread from person to person as a consequence of social perception. Neuroscientific investigation of these phenomena suggests that affective consciousness depends on perception of the social world in much the

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same way that it depends on perception of the body. It appears, in short, that consciousness is a 'socially embodied' capacity, in two senses of the term (articulated below). In the second part of the paper I look at the flip side of this thematic coin. Here I argue that the distinctive sociality of our species, especially its moral dimension, rests heavily on our ability to represent the conscious states of others. In closing, I try to connect the two main claims of the paper – the claim that consciousness is essentially social, and the claim that thinking about consciousness is socially essential – by showing how they jointly point to a kind of circular causal-mechanistic nexus between consciousness and social mindedness.

2. The social basis of experience

In this section, I will argue that consciousness is fundamentally a social phenomenon, in two respects. First, each of us experiences damage or disorder in our social relations in partly the same way, and via partly the same neural mechanism, that we experience damage or disorder in our bodies. In effect, we experience our reflection in the social world as a literal extension of ourselves. Second, each of us "catches" the affective states of those around us. As a result, consciousness is dispersed across the local social environment. This helps to explain why pleasant experiences are more pleasant when shared with another person: the other person's pleasure is reflected back onto oneself, amplifying the initial hedonic signal (likewise, *mutatis mutandis*, for unpleasant experiences). Feedback loops of this sort are a direct consequence of the fact that consciousness is essentially a 'viral' phenomenon, in the sense I will explain below.

2.1. Social pain

Most of us have experienced serious physical pain: a blinding headache, a terrible cramp, an excruciating burn. No one doubts the unpleasantness of these episodes. But some of the most memorably unpleasant experiences in life are associated not with bodily upsets, but rather with upsets of the social kind. Compared with the experience of a bad breakup or a death in the family, the worst of headaches may not seem so bad after all. Then again, it is not clear in what sense the experiences *are* comparable. Apart from their generally aversive character and negative hedonic tone, it is not clear that headache and heartache have much in common. To decide whether there is a deeper connection here, we need to consult the relevant science.

We begin with the official story of pain. According to the International Association for the Study of Pain, pain is "an unpleasant sensory and emotional experience associated with actual or potential tissue damage, or described in terms of such damage" (Melzack & Wall, 1996). This gloss captures the dual-aspect nature of pain, namely, the fact that pain has both a sensory and an affective component. The sensory component includes features such as location (e.g., hand vs. foot), intensity (mild vs. severe), and texture (dull vs. sharp, burning vs. throbbing). The affective component is harder to decompose into features. Ratings along this dimension are primarily intended to measure the raw unpleasantness, aversiveness, and bothersomeness of the sensation.

The two components of pain are neurally distinct and functionally independent (Price, 2000). Neurally speaking, the sensory component is subserved by a lateral pathway ending in somatosensory cortex, whereas the affective pathway is more medial and tops out in the anterior cingulate cortex (ACC). In functional terms, sensory and affective pain processing are doubly dissociable. Patients with intractable pain who have undergone cingulotomy – that is, surgical destruction of the entire cingulate gyrus, including the ACC – report that their pains persist but no longer bother them. Asked how he was feeling, one such patient replied: "Oh, the pains are the same, but I feel fine now, thank you" (Damasio, 1994, p. 266). Roughly the same phenomenon, what Dennett (1978) calls 'reactive dissociation', is often seen in patients treated with morphine or other opium derivatives. In general, dissociability of the affective dimension of pain from the sensory dimension has been well established for some time. The reverse dissociation (affect without sensory qualities) is less common, but it too has been documented. Ploner, Freund, and Schnitzler (1999) reported on a stroke patient with a focal lesion in somatosensory cortex who described painful laser stimuli as unpleasant and aversive but could not specify the location, intensity, or texture of the evoked feelings in any detail. Hence, though normal pain has both an affective and a sensory aspect to it, these aspects appear to be both physiologically and functionally separable from each other.

These facts provide the entering wedge for theorists of social pain, understood as "a specific emotional reaction to the perception that one is being excluded from desired relationships or devalued by desired relationship partners or groups" (MacDonald & Leary, 2005, p. 202). Part of the motivation for social pain theory is evolutionary (Panksepp, 1998, 2003). Among the distinguishing features of humans as a species is our lack of precocity and the relatively slow pace of our cognitive and motor development. Given the greatly protracted dependence of human young on their caregivers, the capacity to detect damage to one's social relations is as necessary to survival – hence, as fitness-enhancing – as the capacity to detect damage to one's body. Research in the area is also animated by the observation that social injury is no less distressing than injury of the physical kind, and that the neural and psychological correlates of such distress are similar. For these reasons, some social pain theorists suggest that the commonsense equation of pain with physical pain is a metaphysical mistake: "In our analysis, it is most accurate to say that the affective responses to physical trauma usually described as physical pain are themselves a subcategory of emotional pain, albeit a fundamental one" (MacDonald & Leary,