

## In this Issue

# Neural bases of situational context effects on social perception

In the 1960s, the television show *Candid Camera* produced a segment in which an unsuspecting target individual enters an elevator filled with one or more confederates working with the show. The confederates would collectively stand all facing the back or the side of the elevator rather than facing front. The target invariably would have a quick look around at the others and then change his orientation in order to fall in line with them. Sometimes, after this initial display of conformity, the confederates would all turn and face a new direction only to have the target change along with them. In one clip, a target removes his hat after seeing those around him do so and then puts the hat back on when he sees that the others have replaced their hats. This segment of *Candid Camera* demonstrates one of the fundamental insights of social cognition: people look to the social environment and external context to guide their behavior, particularly when the appropriate course of action is ambiguous or undefined. The ‘power of the situation’ to guide behavior has been observed in countless studies of conformity (Asch, 1956; Sherif, 1937), obedience to authority (Milgram, 1963) and diffusion of responsibility (Latane and Darley, 1970).

Following these classic studies, social cognition moved on to examine the ways in which situational information and social priming can modulate how individuals perceive the thoughts, feelings and dispositions of others (e.g. Devine, 1989; Snyder and Frankel, 1976). In one of the first neuroimaging studies to examine the impact of the situational context on social perception, Mobbs *et al.* (2006) (in this issue; see also Kim *et al.*, 2004) examined the effects of contextual information on emotion attributions. Specifically, participants made judgments of targets’ expressed and felt emotion based on pictures of emotionally expressive targets. However, before seeing each target face, participants were shown a photograph [from the International Affect Picture System (IAPS), Lang *et al.*, 1999] to which the target was ostensibly reacting. In order to keep the target expressions within the realm of possible reactions to photographs, target faces were displaying mildly negative, neutral, or mildly positive facial expressions.

Mobbs *et al.* (2006) replicated the expected behavioral effect such that a target shown reacting to a positively valenced IAPS picture was itself seen as experiencing and expressing more positive emotion than the same target shown reacting to a negatively valenced IAPS picture. Thus, a happy facial expression was seen as more happy if the participant believed that the target was viewing a pleasant scene and more negative if the participant believed the target was viewing an unpleasant scene. Mobbs *et al.* (2006) found a network of inferotemporal regions in the ventral visual stream previously associated with social cognition (temporal pole, fusiform gyrus, and amygdala; Lieberman, 2006) that were more active when the situational context was consistent with, and thus promoting the mild expression present on the target’s face. Additionally, prefrontal activations were observed to the extent that neutral non-expressive targets were rated to be experiencing the emotion consistent with the IAPS image.

These results suggest dual processes in the brain by which the situational context may inform emotionality judgments paralleling findings from the behavioral literature. On the one hand, when the target’s face is emotionally expressive, the situational context may serve to automatically amplify natural construals by way of bottom-up priming through inferotemporal cortex. This would amount to a priming pathway by which the valenced representations activated by the emotional scenes automatically bias the construal of subsequent applicable social targets. Alternatively, non-expressive faces, which are by definition the most ambiguous, with respect to emotional experience may lead the participant to explicitly consider the situational information in order to logically determine the emotional state of the target. This pathway would rely more on prefrontal capacity for conditional reasoning (e.g. if the target was just viewing a negative scene, then he is probably feeling somewhat negative right now). It would be interesting to find out how the inferotemporal and prefrontal activation patterns change as a function of whether the scenes presented prior to each target face is described as having been seen (or not) by the target or not. A standard dual-process account would predict that

the inferotemporal effects would remain as long as the scenes precede the target faces, whereas the prefrontal effects should depend on the belief that the target was viewing this scene, and is therefore a valid cue for social inferences about the target's mental state.

Additionally, there is a wide range of social inferences made beyond a target's current state and contextual information can be used in very different ways depending on one's inferential goal. For instance, Trope (1986) gives the example of seeing a weeping person who has either just found out that his close friend died or that he won the lottery. The situational context will affect one's judgment whether one is interested in understanding the person's current feelings or his enduring dispositional tendencies, but will do so differently depending on the question one is trying to answer. Consistent with the findings of Mobbs *et al.* (2006) an observer is likely to judge the target's current state as more sad if he has just learned of a friend's death than if he has won the lottery. Alternatively, the same situational information should be used to conclude that the target whose friend has died is not especially sad in daily life. That is, because the target is in a situation that would make nearly everyone sad, one can assume the target's sadness is temporary rather than a part of his enduring personality. Moreover, Trope (1986) suggested and several labs have found that dual task conditions that put observers under cognitive load tend to impair the use of situational information in forming dispositional judgments, but not in forming judgments about a target's current state (Gilbert, 1998). The study by Mobbs *et al.* (2006) is an important step in the direction of examining the neural bases of the various ways in which situational and social factors shape the way we construct interpretations of the people around us and hopefully portends much more

research on these complex but critical dynamics of social perception.

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