

Look me the eyes: Eye contact mediates the empathic giving via perceptual dehumanization

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In this proposal, we suggest a series of studies that will test if and why the avoidance of eye contact is a key driver of selfish behavior. We argue that avoiding eye contact leads to changes in perceptual categorization (or *perceptual dehumanization*), and that these changes in perceptual categorization reduce the human empathic response and ultimately reduce prosocial behavior.

Human beings seem to be hardwired to feel others' emotional pain. Feeling empathy for a person leads to increased altruism (see Batson, 1991; Lowenstein & Small, 2007; Preston & De Waal, 2002). However, human history is rife with examples where individuals are indifferent to the suffering of others (e.g., genocide, criminal punishment). Our capacity to shift from kindness to indifference appears highly responsive to situational triggers or activating conditions. Experimental social psychologists have traditionally emphasized the power of situations to transform behavior (Darley & Latane, 1968; Latane & Darley, 1968; Milgram, 1963). However, this approach does not fully capture the basic perceptual-cognitive processes underlying changes in behavior.

Empathy, like other emotions, is highly attuned to visual imagery – the more vivid the imagery, the more likely one is to be empathetic. This translates directly to prosocial behavior: salient, easy to imagine, and similar victims lead to a greater empathetic response and more altruistic behavior (Schelling, 1968; Small & Lowenstein, 2003). More simply, without external constraints, immediate victims with visible needs induce greater empathic responses. Given the importance of visual cues when there is a visible and identifiable victim, attentional deployment may produce automatic changes in how the individual constructs the situation in order to avoid helping. We argue that attentional deployment can produce changes in perceptual categorization, which inhibits the empathic response.

It has been well established that the visual system treats faces as special: there is a perceptual categorization of faces as faces (Yin, 1969; Kanwisher, McDermott, & Chun, 1997; Le Grand, Mondloch, Maurer, & Brent, 2001; Maurer, Grand & Mondloch 2002; Dalton, Nacewicz, Johnstone, et al., 2005). This categorization results in specialized face-specific processing. Unlike most objects, which rely on analytic (i.e., piecemeal) processing, faces are processed holistically (see Maurer, Grand & Mondloch 2002 for a review). This specialized processing can be detected through a number of effects – such as inversion, blurring, and the Face Composite Effect (FCE). Specialized face processing makes us particularly good at distinguishing different faces – people are far better at recognizing faces than comparably complex object (Yin, 1970; Farah, 1996; Farah, 1998). It also facilitates reading social cues, such as emotions, which faces frequently convey.

A reduction in holistic processing would indicate that a face is no longer being perceptually encoded as a face and that people are instead relying on other types of processing generally associated with object recognition. Prior work by Fincher and Tetlock (in revision) has documented inhibitions of holistic processing in observers' perception of norm violators – observers perceive these faces as less human and rely more on processes associated with object recognition. These results further indicate that these perceptual shifts reduce cognitive conflict and facilitate punishment.

In the current proposal, we argue that changes in perceptual processes serve the socially adaptive function of inhibiting empathy – specifically, we propose that *perceptual dehumanization* is not limited to punishment, but that it also occurs in situations in which individuals cannot or do not wish to help the target. In other words, this change in perceptual categorization also facilitates self-interested behavior (e.g., not helping). The change in visual processing reduces our empathic response in two ways: (1) the individual is deindividuated – featural processing of faces substantially reduces our ability to recognize individuals as human and increases our reliance on object categorization heuristics; (2) our ability to encode facial expressions is substantially reduced.

Importantly, we argue that this change occurs due to a strategic attentional deployment: individuals are avoiding eye contact. Eye contact is central to theory of mind because it allows “mind-reading,” or understanding a person’s intentions and desires through their gaze (Baron-Cohen Wheelwright, Hill, Raste, & Plumb, 2001; Norman, Polyn, Detre, & Haxby, 2006). When people don’t want to help a target individual, avoiding eye contact directly facilitates this behavior. Avoiding eye contact allows us to avoid engaging with the individual.

However, we argue that avoiding eye contact also changes the visual processing of the face. Many face-perception studies have shown that the eyes are critical for the perception of upright faces. The eyes are (i) highly diagnostic for identity, expression, and gender judgments (Vinetto et al., 2004), (ii) are essential for monitoring ongoing social communications (Klin et al., 2002), and (iii) are sufficient to drive the so-called face N170 component in ERPs (Bentin et al., 2002). Failure to encode eye information can also lead to breakdowns in face recognition in individuals with autism (Wolf et al., 2008) and patients with prosopagnosia (Bukach et al. 2007; Caldara et al., 2005; Rossion et al., 2009).

The current work is important in several ways. First, it indicates that perceptual categorization facilitates social as well as visual processes, suggesting that some social processes may function by co-opting more basic processes. The functional argument is summarized cyclically as follows: **Selfish behavior → Eye contact avoidance → Perceptual dehumanization → Selfish behavior.**

Theoretical Link	Study
Selfish behavior → Perceptual dehumanization (PD)	<p>In the first phase of the study, participants will be given a choice between keeping money for themselves or giving the money to a charity. We will then measured the degree to which failure to donate predict the perceptual dehumanization of individuals who are recipients of target charity, individuals who are the recipients of another charity, and self-sufficient individuals (charities are counterbalanced). We predict that failures to help will lead to changes in perpetual categorization, or perceptual dehumanization</p> <p>We will a recognition memory task to measure perceptual dehumanization. In half of the blocks, faces will be displayed upright, and in the other half faces will be inverted (or blurred). In the learning phase, participants will learn face-name pairings by viewing simultaneously on screen a single face and a single name for a fixed duration. During the test phase, all faces from the learning phase of the block will be displayed in a single array that remains on screen. Names will appear serially below the array, the participant will identify the face originally linked to the name during the learning phase.</p>
Selfish behavior → Eye contact avoidance	<p>In the first phase of the study participants will be given a choice between keeping money for themselves or giving the money to a charity.</p> <p>Participants will then watch 3 videos in a random order: video of recipient from the charity they did or did not donate to; video of recipient from control charity; video of control individual. The eye tracking device will record eye movements during 3 videos. We predict less eye contact when individuals do not donate than when they have donated.</p>
Eye contact avoidance → Selfish behavior	<p>Participants will be allow participants to skype with their partner prior to a dictator game (in which they are the dictator). We will track eye contact during the call. Eye contact will be used to predict donations. Our model predicts that people who make lower donations will make less eye contact.</p>
PD → Selfish behavior	<p>We will instruct participants to process faces of needy victims they can donate to holistically or analytically. Holistic processing will produce higher donations</p>

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