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Cognitive egocentrism differentiates warm and cold people ☆

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ABSTRACT

Cold individuals are relatively egocentric in their social relations, whereas warm individuals are not. Developmental and clinical literatures have suggested that cognitive egocentrism underlies social egocentrism, ideas that guided our hypotheses. Cognitive egocentrism can be assessed in very basic terms in tasks in which the question is whether priming a lateralized self-state (left versus right) biases subsequent visual perceptions in an assimilation-related manner. Biasing effects of this type reflect a tendency to assume that the self's activated state is a meaningful source of information about the external world when it is not. As hypothesized, cognitive egocentrism was evident at high, but not low, levels of interpersonal coldness, results that can be extended in understanding variability in relationship functioning.

1. Introduction

There are two primary ways in which people differ in their interpersonal behavior. Some people are more dominant whereas others are more submissive (Wiggins & Trapnell, 1996). Additionally, some people are warm whereas others are cold (Wiggins & Trapnell, 1996). These are independent dimensions of personality and social behavior (Locke, 2011; Moskowitz, 2010). People want to know about the warmth-coldness of others first and foremost before interacting with them (Hogan, 1996). There are good reasons for possessing this knowledge. The warmth-coldness dimension is a primary predictor of relationship quality (Markey & Markey, 2007), personality disorders (Locke, 2006), aggressive behavior (Martin, Watson, & Wan, 2000), criminality (Edens, 2009), and social support (Smith, Traupman, Uchino, & Berg, 2010).

Underlying warmth-coldness, we suggest, is a basic stance toward others that is socially egocentric (cold individuals) versus not (warm individuals). For example, cold individuals value autonomy to a greater extent, whereas warm individuals value nurturance to a greater extent (Wiggins & Broughton, 1991). Cold individuals view others as less trustworthy, whereas warm individuals view others as more trustworthy (Moskowitz, 2010). Cold individuals often seek to isolate the self from others, whereas warm individuals are, if anything, sometimes too dependent on others and motivated to please them (Strack & Lorr, 1994; Wiggins & Pincus, 1989). A communal (Bakan, 1966) label for this dimension is apt because warm individuals score higher in femininity and quite a few other motivations and traits suggestive of a greater appreciation for others and goals to accommodate others in everyday social interactions (Locke, 2011; Markey & Markey, 2007; Wiggins & Broughton, 1991). Cold people, by contrast, are less communal and more egocentric in their social relations (Wiggins & Trapnell, 1996).

By saying that cold individuals appear to be socially egocentric, we do not mean to suggest that they always manipulate others in a self-serving or self-enhancing fashion. Quite the contrary, they often do not. For example, cold individuals have internalizing symptoms such as anxiety and depression that cannot be viewed in terms of self-enhancement or related factors such as narcissism (Smith et al., 2010). Additionally, coldness is a predictor of social isolation (Smith, Glazer, Ruiz, & Gallo, 2004) and personality disorders associated with it (such as schizoid personality disorder: Wiggins & Pincus, 1989). Thus, although coldness is predictive of aggression (Bettencourt, Talley, Benjamin, & Valentine, 2006) and psychopathy (Jones & Paulhus, 2011), it is also predictive of avoiding others due to a distrust of them (Wiggins & Broughton, 1991). Regardless of whether coldness takes a manipulative or avoidant form, the underlying interpersonal dynamic seems the same – a self-centric perspective on relationships.

1.1. Cognitive egocentrism, social egocentrism, and warmth-coldness

Developmental and clinical researchers have proposed that cognitive egocentrism underlies social egocentrism. Cognitive egocentrism can be defined and operationalized in different manners, but its central feature is that the self's perspective or state is favored

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even when it cannot be a good guide to the perspective or state of another. Piaget (1932) developed several cognitive measures of egocentrism. Egocentrism, for example, is revealed to the extent that the child fails to correct for his/her own visual perspective when describing an object to another person with a different visual perspective (Lempers, Flavell, & Flavell, 1977). Such tasks, in addition to others that employ similar logic (Wimmer & Perner, 1983), have proven their worth in understanding how children become less socially egocentric as they age (Hobson & Hobson, 2008). A cognitive view of social egocentrism is not limited to children, however, as adults with autistic features perform poorly in such tasks as well (Volkmar, 1998). There is also evidence in social psychology that perspective taking – defined in terms of a cognitive appreciation of another's distinct goals and viewpoints and typically assessed in trait-related terms (Davis, 1983) – results in less stereotyping and prejudice as well as outcomes consistent with greater accommodation to the needs and wishes of others (Galinsky, Ku, & Wang, 2005).

There is no extant research linking the warmth-coldness dimension of the interpersonal circumplex to cognitive egocentrism, but such results would make sense given the literatures reviewed above. In addition, another purpose of the studies was to resurrect a very basic form of cognitive egocentrism that displayed promising findings in the 1940s and 1950s. Eschewing complicated verbal scenarios where demand could be present, Werner, Wapner, and colleagues (e.g., Wapner, Werner, & Chandler, 1951; Werner & Wapner, 1952; Werner, Wapner, & Bruell, 1953) showed that priming a lateralized self-state often biased subsequent visual perceptions in a manner consistent with cognitive egocentrism. For example, leftward (relative to rightward) head-tilt typically results in impressions that the visual world has tilted with the self. Although very basic, this is a form of cognitive egocentrism because it presumes that the self's activated state corresponds with the nature of external reality when this is not so.

The utility of such probes of cognitive egocentrism was further established in a monograph by these investigators (Wapner & Werner, 1957). In this monograph, it was shown that individuals more prone to such biases were prone to them across many different tasks. Such results suggest that perceptual probes of cognitive egocentrism may capture something both inherent to and fundamental about the person. Wapner and Werner further showed that such biases exhibited a clear developmental trend from early childhood (larger biases) to young adulthood (smaller biases), consistent with Piaget's (1932) cognitive-developmental perspective of egocentrism. Finally, they suggested, but did not demonstrate, that their paradigms might offer significant insights into adulthood levels of social egocentrism.

In relation to such paradigms, lateralized auditory primes resulted in the clearest evidence of assimilation-related effects on subsequent visual perceptions (Wapner & Werner, 1957) and we therefore used such procedures. In this sort of paradigm, cognitive egocentrism is established to the extent that visual perceptions are biased leftward following auditory primes to the left ear and rightward following auditory primes to the right ear, essentially revealing a pattern in which the person presumes – at a very implicit but nonetheless potentially important level – that the external world corresponds to an activated state of the self when this is not so. We hypothesized that priming effects of this type would be pronounced at high levels of interpersonal coldness and potentially absent at low (i.e., warm) levels of interpersonal coldness. Two studies were conducted to investigate this hypothesis.

2. Study 1

A cognitive task was created in which lateral auditory primes preceded a visual perception task. Participants were told that the two phases of each trial were independent, yet we expected cold individuals to be influenced nonetheless. An additional interest, and an orthogonal one, was whether positively-valenced sound clips would produce assimilation effects to a greater extent than negatively-valenced sound clips, as people are generally motivated to approach pleasant stimuli and avoid unpleasant stimuli (Lang, Bradley, & Cuthbert, 1997; Lewin, 1936).

2.1. Method

2.1.1. Participants and general procedures

Participants were 81 (47 female) undergraduate volunteers from North Dakota State University who received course credit. Sessions consisted of groups of six or less. General instructions mentioned that the study involved different types of perceptions. Computer monitors had a screen height of 13.65 in. and the screen resolution was set to 1280×1024 pixels. The cognitive egocentrism assessment was programmed using E-Prime software and run on a 32-bit distribution of the Windows XP operating system. Interpersonal coldness was subsequently assessed via MediaLab software.

2.1.2. Cognitive egocentrism assessment

Participants were informed that we were interested in their ability to alternate between two very different tasks. The first task involved attending to sounds and the second task involved making visual judgments. These tasks were to be treated as independent and, in fact, were independent in procedural terms. Nevertheless, our primary interest was in whether lateralized sounds would bias subsequent visual perceptions in an assimilation-related manner. There were 60 such paired trials.

Participants wore headphones during the cognitive egocentrism assessment. The headphones were set such that we were able to present auditory stimuli to either the left or right ear rather than both. The experimenter ensured that the headphones were worn properly such that the left headphone speaker was over the left ear. Auditory primes consisted of 20 six-second sound clips from the International Affective Digitized Sounds (IADS) database (Bradley & Lang, 1999). Ten were positive (e.g., applause, laughing) and 10 were negative (e.g., explosion, gunshot). On the basis of the 1–9 rating norms of Bradley and Lang, the positive stimuli were more pleasant ($M = 7.49$; $SD = .25$) than the negative stimuli ($M = 3.22$; $SD = .18$), $F(1,19) = 1922.83$, $p < .01$. Positive and negative stimuli were, however, equally arousing ($M = 5.90$; $SD = 1.00$ for positive stimuli & $M = 6.33$, $SD = .65$ for negative stimuli), $F(1,19) = 1.3$, $p > .25$.

Sounds were selected at random and randomly assigned to the left or right ear prior to each visual perception judgment, with two constraints. Each sound was presented three times (i.e., random selection without replacement). Such procedures guarded against the possibility that the same sound would be repeated across consecutive trials. In addition, the program ensured that there were 15 trials each for positive/left, positive/right, negative/left, and negative/right combinations, thus maximizing the number of trials per cell of this design.

Subsequent to each auditory prime, the visual perception portion of the trial began. A small (5-pixel) white dot was presented at one-fourth distance from the bottom of the computer screen. Its position was randomized such that it was 100 pixels left of center, 50 pixels left, at center, 50 pixels right, or 100 pixels right. Such procedures precluded the possibility of ignoring the actual position of the dot. Simultaneously, a line of 20-pixel width appeared at one-fourth distance from the top of the computer screen. Participants were to move their mouse cursor (which originated at center screen) to the portion of the line directly above the presented dot