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Self-deception and impaired categorization of anomaly

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Abstract

One hundred and forty community volunteers were prescreened for upper and lower quartile scores using the Balanced Inventory of Desirable Responding [BIDR; Paulhus, D.L. (1988). *Assessing self-deception and impression management in self-reports: The Balanced Inventory of Desirable Responding. Unpublished manual*. Vancouver, British Columbia; University of British Columbia, Measurement and control of response bias. In J. P. Robinson, P. R. Shaver, & L. Wrightsman (Eds.), *Measures of personality and social-psychological attitudes* (pp. 17–59). San Diego, CA: Academic Press, 1991], and classified into stable High ($n=14$) and Low ($n=15$) self-deception groups using the Self-Deceptive Enhancement subscale of the BIDR. Participants identified normal and anomalous computer-displayed playing cards [following Bruner, J. & Postman, L. (1949). *Journal of Personality*, *18*, 206–223], presented for short (~16 ms), then increasingly longer durations. High and low self-deceivers identified the normal cards equally rapidly. Highs, however, took twice as many trials as lows ($M=11.21$, S.D. = 9.65, vs. $M=5.00$, S.D. = 3.87) to identify the anomalous card correctly twice (t [16.85] corrected for unequal variances $= -2.25$, $P=0.019$, one-tailed). Self-deception thus appears associated with impaired categorization of anomaly.

Keywords: Self-deception; Anomaly; Exploration; Information processing; Categorization

An anomaly is an unexpected event of unspecified significance. It has long been known that anomaly elicits non-specific anxiety, particularly when it is rapidly manifested or proximal in nature (Dollard & Miller, 1950). More recent investigations indicate that anomaly-related anxiety emerges as a consequence of the unexpected or undesired disruption of goal-directed activity (Carver & Scheier, 1982; Gray, 1982, 1987; Oatley & Johnson-Laird, 1987), and that it constitutes

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rapidly generated but relatively low resolution information about potential sources of harm (LeDoux, 1996; Peterson, 1999a; 1999b). This rapidly generated, low resolution, affective information appears akin to Damasio's (1994) "somatic marker," which serves initially to delimit and direct voluntary attention.

Under optimal conditions, when initial wary attention indicates that nothing additionally unpredictable or otherwise threatening is immediately likely to occur, an anomalous event also produces curiosity and exploratory behavior (Blanchard & Blanchard, 1989; Dollard & Miller, 1950; Gray, 1982, 1987). Exploratory behavior may be conceived as a multi-stage process, which transforms the anxiety-inducing anomaly into detailed, explicit utilitarian information. Such information can be used to update currently dysfunctional plans and goals. The stages of exploration appear to include: (1) registration of the undifferentiated anomaly, most likely in the form of "something other than what was expected"; (2) assignation of provisional relevance to the undifferentiated anomaly, in the form of an affective marker; (3) active motoric or abstract examination of the anomaly, undertaken in the attempt to extract more information about its significance, functional and objective; (4) modification of perceptual, emotional, or cognitive category and habit, as a consequence of the integration of newly gained information; and (5) transformation of plans and goals, so that the environment characterized by presence of the anomaly is once again mastered and rendered useful and predictable (Peterson, 1999a).

The information derived from such investigative exploration comes at a price, however. First, exploration is effortful (Ohman, 1979, 1987). This is perhaps because the initial phases of processing novel information activate large cortical areas (Tulving, Markowitsch, Kapur, Habib, & Houle, 1994), at high metabolic cost (Roland, Eriksson, Stone-Elander, & Widen, 1987). Second, exploration is risky. Active exploration of the unknown exposes the explorer to potential danger, both environmental and psychological, and this danger must be taken into account. Rats re-exploring a once-safe area, for example—contaminated by the recent presence of a cat—hunch down and make rapid "corner runs" through the area to protect themselves from detection, while gathering valuable but dangerous information about the area's current safety (Blanchard & Blanchard, 1989). Human beings exploring something novel—whether territory or abstraction—run the additional risk of upsetting their most valuable and time-honored abstract presuppositions (Kelly, 1969; Kuhn, 1970), as the implications of the unexpected can reveal themselves at increasingly basic or paradigmatic, and therefore increasingly troublesome, levels of understanding. In short, there is potent *a priori* or unlearned motivation for avoiding useful exploration in the face of the genuinely dangerous unknown (Peterson, 1999a, 1999b): what you don't yet know *can* hurt you.

Self-deception, a commonly used but problematically defined term (c.f. Mele, 1997), might therefore profitably be construed simply as the opposite of exploration in the face of anomaly (Peterson, 1999a, 1999b). We hypothesize, specifically, that the self-deceptive individual fails to engage in the latter stages (3–5) of the process that turns evidence of error into information useful for the modification of non-productive plans and goals. This failure leads to a mental state in which the self-deceiver continues to hold beliefs that have been indicated as problematic by his or her own affective response (see Greenwald, 1988, 1992, 1997, for an alternative failure-of-information-processing account of self-deception). The greater the perceived anomaly—that is, the broader or more basic the plans, goals, or conceptions it disrupts—the more negative the affective response, and the more potent the motivation for self-deception.