

Relative state, social comparison reactions, and the behavioral constellation of deprivation

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Abstract

Pepper and Nettle compellingly synthesize evidence indicating that temporal discounting is a functional, adaptive response to deprivation. In this commentary, we underscore the importance of the psychology of relative state, which is an index of relative competitive (dis)advantage. We then highlight two proximate emotional social comparison reactions linked with relative state—personal relative deprivation and envy—that may play an important role in the deprivation-discounting link.

Pepper and Nettle elegantly elucidate how deprivation reduces personal control through individuals' (in)ability to “purchase” reduced hazard exposure. Here, we emphasize the importance of relative (vs. absolute) deprivation in the etiology of the BCD. We argue that decision-making is necessarily sensitive to relative state, and that emotional social comparison reactions to comparative disadvantage—namely, personal relative deprivation and envy—may be key proximate mechanisms that serve as a “barometer” of individuals' relative (dis)advantage, in turn motivating behaviors in the BCD.

Like all other organisms, humans do not make explicit and conscious biological fitness calculations to guide behaviour. Rather, judgment and decision-making (and cognition more generally) likely involves the use of a toolbox of ecologically rational implicit heuristics (Todd, Gigerenzer, & the ABC Research Group, 2011). These “fast and frugal” heuristics are in large part motivated by the acquisition of *proxies of fitness*: mates, resources, and social status that increase the probability of individuals surviving and producing viable offspring (i.e., enhancing inclusive fitness; Mishra, 2014).

Mishra, Barclay, and Sparks's (2016) *relative state model* proposes that decision-makers are particularly sensitive to cues of relative (dis)advantage (i.e., decision-makers are sensitive to their *relative state*) arising from both embodied and situational factors. In turn, relative state informs decision-making around proxies of fitness. The logic of the relative state model is simple. Fitness is necessarily a product of reproductive outcomes relative to others (Hamilton, 1964). Individuals who failed to notice (or did not counteract) disadvantaged access to proxies of fitness would be less likely to have their genes represented in future generations (Garay & Mori, 2011). Consequently, natural selection likely gave rise to cognitive and emotional mechanisms calibrated to be sensitive to relative state.

Feelings of personal relative deprivation and envy may serve as proximate “barometer” measures of one’s own relative state, consequently guiding behavior (including those in the BCD). Personal relative deprivation describes feelings of angry resentment in reaction to perceptions of unfair disadvantage (Smith, Pettigrew, Pippin, & Bialosewicz, 2012). Recent empirical work has linked personal relative deprivation with several outcomes implicated in the BCD. For example, personal relative deprivation has been linked with such present-oriented behaviours as gambling, delay discounting, antisocial risk-taking, criminality, and reduced cooperation (e.g., Callan, Shead, & Olson., 2011; Mishra & Novakowski, 2016). Personal relative deprivation has also been associated with poorer mental and physical health, even after controlling for indices of absolute socioeconomic status (e.g., Callan, Kim, Williams, 2015; Mishra & Carleton, 2015).

Envy is another proximate emotional consequence of relative (dis)advantage. Envy is defined as a feeling of inferiority, hostility, and resentment when another person or group has a desired advantage (Smith & Kim, 2007). *Malicious envy* and *benign envy* are different ways that people react to disadvantage. Malicious envy encompasses feelings of injustice, the motivation to harm the envied individual, and perceptions of low control. Benign envy encompasses the motivation to strive upwards, and to exercise greater perceived control over future outcomes (Van de Ven, Zeelenberg, & Pieters, 2009). Since both malicious envy and the BCD stem in part from low perceived control, malicious envy may represent an important proximate emotional mechanism involved in the BCD. In contrast, the existence of benign envy suggests the presence of an alternative to the BCD among the disadvantaged.

Perceived disadvantage may be initially met with a reaction of benign envy, with individuals feeling control over their situation and feeling able and motivated to strive upwards (thus not exhibiting the deleterious behaviors implicated in the BCD). However, if individuals’ efforts are routinely unsuccessful (as they often are in environments with low upward mobility), they may lose a sense of control over their situation. In turn, individuals may see their relative disadvantage as undeserved (“I’ve worked hard and nothing has come of it. It’s wrong that other people have it so easy!”), and come to feel personal relative deprivation and/or malicious envy, eventually resulting in behaviours and outcomes characterized by the BCD.

The psychology of relative state has important bearing on such contemporary societal issues as inequality. Victimization by inequality, like extrinsic mortality risk, decreases an individual’s control over their situation and impedes their ability to capitalize on deferred rewards. Given low rates of social mobility in human populations (Clark, 2014), inequality tends to be experienced persistently across the lifespan. Those who are born disadvantaged (regardless of whether this disadvantage is a product of embodied or situational influences) likely learn through experience and observation that they have little control over their relative state. Consequently, victims of inequality allocate their limited time, resources, and energy to immediate, often riskier, strategies (reviewed in Daly, 2016).

Importantly, relative state is relevant even among individuals who are not in a situation of absolute deprivation. Consider the example of the workplace. Employees are stratified by income, occupational status, benefits, and reputation. Although many employees may be comfortably insulated from extrinsic mortality threats, perceived disadvantage in the workplace may motivate such present-oriented behaviours such as reduced cooperation, embezzlement, and

absenteeism. Objectively privileged individuals may still experience negative social comparison reactions and act in consequence (e.g., “white collar” crime; Agnew, Piquero, & Cullen, 2009).

Taken together, the findings reviewed above (and in the target manuscript) suggest that absolute deprivation (e.g., poverty), and relative deprivation (e.g., inequality) are importantly associated with the BCD. Both are important inputs into the psychology of relative state. We further suggest that proximate social comparison reactions (personal relative deprivation and envy) are emotional “barometer” measures of one’s own relative state that in part motivate the BCD. Future research should examine whether perceived inequality and perceptions of low control over social mobility predict (a) greater feelings of malicious envy and personal relative deprivation, and (b) lesser feelings of benign envy, and whether these reactions can explain additional variance in the BCD beyond early mortality exposure, perceived control over mortality risks, and other indices of absolute deprivation.

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