



A Broad Consideration of Motivation, with a Focus on Approach Motivation

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The target article by Scholer, Cornwell, and Higgins (2019) raises important issues regarding approach motivation. We would like to add additional breadth to the consideration of what approach motivation is and how it functions. One of our goals in this response is to move away from questions such as whether approach motivation is “better” than avoidance. We make the case that it is often misleading to judge psychological constructs in terms of whether they are good or bad. Instead, psychological process can be better understood when examined dispassionately, in terms of their characteristics and functions, rather than evaluatively.

A Broader View of Approach and Avoidance Motivation

In our view, approach motivation assists organisms in acquiring resources and avoidance motivation assists them in not being harmed by threats. These motivational directions are ancient and appear to exist in species capable of movement. Even organisms as basic as worms move toward food and away from noxious stimuli such as light (Schneirla, 1959). Indeed, approach motivation in the roundworm (*Caenorhabditis elegans*), which has just 302 neurons, involves dopamine, the same neuromodulator critical in much human approach motivation (Oran et al., 2018). We believe that any discussion of approach and avoidance should be broad enough to apply to all organisms capable of approach and avoidance, not only to humans.

A good candidate for such a model of approach is the SEEKING system proposed by Panksepp (2013, p. 237), one of the most influential researchers and theoreticians in motivation and emotion. Panksepp, who capitalized the names of his constructs to keep them distinct from layperson’s concepts of those terms, proposed that SEEKING is an appetitive system that impels organisms to approach their worlds with interest, exploration, and eagerness, allowing them to find the resources they need for survival and reproduction. SEEKING is inherent to the organism and does not rely on external stimuli, although rewarding stimuli do activate the SEEKING system. This conception of approach motivation is broader and more inclusive of nonhuman animals than that covered by the target article.

The target article presents a model of approach and avoidance centered around goals. The authors propose that individuals pursue their goals at multiple levels of a

hierarchy (system, strategic, tactical). This goals-focused view of motivation seems fairly cold and cognitive. It neglects some of the most basic elements of approach motivation, drives such as hunger, thirst, and lust. These visceral states are often what motivate the formation of goals in the first place. For example, lust might motivate an individual to pursue and woo an attractive other. The lust for the attractive other may generate the formation of “higher level” goals such as pursuit of a high-prestige career as a way to impress the lusted-for other. The goal is in service to the motivation, and not the other way around.

In our view, an understanding of approach and avoidance that centers around goals is too limiting and human-centric. We doubt that organisms such as worms and rats form fully conscious goals and execute plans for achieving them. In many cases, they likely feel urges to act and act upon them. Humans may also act impulsively, or they may act deliberately, and conceptions of approach and avoidance motivation should apply to both routes.

In some cases goals may be decided upon coldly and rationally, whereas in other cases goals may be responses to motivational urges or impulses. In general, long-term and abstract goals (e.g., educational achievement, morality, weight loss) tend to have less motivational urgency behind them than short-term goals (e.g., eating a delicious-looking dessert, approaching one’s romantic partner for sex, getting out of the path of a speeding car so as not to get run over). Urgent motives may be enacted without a lot of planning, so a hierarchical conception may not be applicable.

The target article proposes a hierarchical understanding of approach motivation, which seems to imply that motivation is top-down rather than bottom-up. However, research on ego depletion presumes that the pursuit of long-term goals requires resisting powerful short-term impulses, an effortful process that changes the individual’s motivational state, making subsequent self-control more difficult (Inzlicht & Schmeichel, 2012). In other words, acting on bottom-up impulsive motivation is the predominant response tendency, whereas top-down deliberate motivation requires effort and reduces the capacity to exert such effort immediately afterward. Moreover, research on ego depletion has suggested that exerting effort in the pursuit of consciously held goals increases approach-motivational urges. For example, participants who had exerted self-control by suppressing facial expressions of emotions subsequently self-reported greater

approach motivation (Study 1), gambled more often on a low-stakes game (Study 2), and more accurately perceived reward symbols (Study 3; Schmeichel, Harmon-Jones, & Harmon-Jones, 2010). Similarly, dieters who exerted self-control showed increased activity in the nucleus accumbens to photographs of desirable foods, indicating greater reward sensitivity (Wagner et al., 2013). In addition, individuals who are high in trait approach motivation show greater increases in approach motivation following effortful self-control compared to those who are low in trait approach motivation (Schmeichel, Crowell, & Harmon-Jones, 2016). These results suggest that the relationship between goal-pursuit and approach motivation is not simple, as the effortful pursuit of some goals may increase impulsive approach motivation that may undermine those goals.

For the most part, the target article appeared to focus on long-term approach-oriented goals, such as educational achievement. When considering this type of goal, it may be appropriate to examine goal pursuit in terms of a hierarchy of system, strategic, and tactical levels. On the other hand, more immediate, urgent goals may be acted upon at a low level, without much conscious strategizing. However, an individual typically holds many goals, both long- and short-term, both deliberate and impulsive, and these may compete with one another.

While on the topic of hierarchies in motivational theories such as the one presented in the target article and others (e.g., Lang & Bradley, 2008), we wonder if referring to the different levels in the hierarchy as all motivational is accurate (i.e., are all levels equally motivational or motivational at all?). Motivation is often defined as an urge or an impulse to do something, and the organism's exertion of effort (or cost) is used as evidence of motivation. In the case of rats burying noxious-smelling threats (a bleach-soaked cotton ball; Franks, Higgins, & Champagne, 2012), rats with more of an avoidance orientation may have been more likely to bury the "threat" because they "believed" they could not escape the noxious smell (even if they moved to a different but interconnected cage). Instead, they believed that the only way to escape the smell was to bury it. Sure, they had to approach it to bury it, but their moving toward the object to bury it was not approach motivated in the sense of a motivational urge. Had someone else buried it, they would have been satisfied and not motivated to try to bury it again, we suspect. On the other hand, consider a situation in which the rat is exposed to a desired piece of food. The rat is motivated to eat it, and will exert effort to acquire it. If, however, someone else starts to eat it, the rat will be unsatisfied and likely engage in aggression to regain the lost food object.

Motivation is Not Always Conscious

Individuals may often be unaware of the sources of motivation for their behavior, and their conscious strategies may be in the service of rationalizing their behavior. Thousands of studies on cognitive dissonance, spanning over 50 years, have demonstrated that individuals change their cognitions to match their behavior and to justify it (Harmon-Jones,

2019). Implicit motivational processes, such as those that impel dissonance reduction, are neglected in the target article, which focuses on strategies for achieving consciously held goals. However, dissonance-like implicit motivations may commonly guide behavior, as illustrated by the several psychological theories that Aronson (1992) characterized as dissonance in other guises, including self-affirmation theory (Steele, 1988), symbolic self-completion theory (Wicklund & Gollwitzer, 1982), self-evaluation maintenance theory (Tesser, 1988), and self-discrepancy theory (Higgins, 1989), among others. From the wealth of theories uncovering similar psychological processes, it appears that dissonance-like implicit motivations frequently influence a host of psychological processes.

Research on the action-based model of dissonance suggests that dissonance reduction is often an approach-motivated process (Harmon-Jones & Harmon-Jones, 2002; Harmon-Jones, 2019; Harmon-Jones, Harmon-Jones & Levy, 2015). The action-based model proposed that the function of dissonance reduction is to facilitate effective and unconflicted action. The reasoning is that, when one holds cognitions that are in conflict, their action tendencies are also likely to conflict, providing a poor guide for action. By bringing cognitions more closely into agreement, action is facilitated because the action tendencies converge. We reasoned that dissonance reduction should thus be greater when approach motivation is high. This idea has been tested in a variety of dissonance paradigms, and the research has revealed that approach motivation is associated with more dissonance reduction, using experimental as well as correlational methods (Harmon-Jones, Gerdjikov, & Harmon-Jones, 2008; Harmon-Jones, Harmon-Jones, Fearn, Sigelman, & Johnson, 2008; Harmon-Jones, Price, & Harmon-Jones, 2015; Harmon-Jones, Schmeichel, Inzlicht, & Harmon-Jones, 2011; Harmon-Jones, Harmon-Jones, Serra, & Gable, 2011). Greater activity in the ventral striatum, a reward-related region, has also been shown to correlate with greater dissonance reduction (Kitayama, Chua, Tompson, & Han, 2013). These results suggest that approach motivation is mobilized when individuals rationalize their decisions, rather than being a conscious, deliberate orientation while pursuing a goal.

Motivational Urges or Anticipated End-States?

The target article notes, "It is also the case that whether the focus on undesired versus desired end-states is a more powerful motivational force may depend on the nature of the goal domain and the time horizon examined" (Scholer et al., 2019, p. 113). However, we question whether organisms are usually focused on end-states while behaving in a motivated fashion. Let us take as an example the behavior of angry aggression. Is the individual who aggresses against another person attempting to bring about a desired end-state? Or is he or she simply responding to an urgent impulse to attack the source of the anger? Suggestive evidence that the latter is the case is provided by reports that individuals have been observed to attack and destroy

inanimate objects that have angered them. For example, one man who hurt himself by stumbling over a boulder went to get a sledgehammer, returned, and smashed the rock to bits (Frijda & Mesquita, 2000, p. 53). A case study of a 30-year-old man who had sought treatment for repeated aggressive incidents also illustrates the point. He had lost his past three relationships after assaulting his girlfriends, broken more than 10 cell phones, and deliberately crashed his car several times while experiencing road rage. He stated, "When I become angry, I just don't think" and that he "does things blindly." Despite experiencing repeated negative consequences and feelings of deep regret, his angry outbursts had continued since adolescence (Medeiros, Leppink, Seger, Costa, Bernardo, & Tavares, 2015, p. 177). It seems likely that these behaviors have little to do with expected end-states or goals and much to do with immediate approach-related urges.

Does Approach Motivation Feel Better than Avoidance?

The target article also notes that approach motivation often feels better than avoidance motivation (and notes a few exceptions). Although this may often be the case in the moment, the opposite is often true over the course of time. For example, using cocaine and drinking alcohol are approach-motivated behaviors that typically feel good. However, the hangover one experiences the next day may feel very bad. Similarly, let us consider regulatory focus when looking at the question of illicit sex. One may *ideally want* to have sex with an attractive extramarital partner but believe that he or she *ought* to remain faithful to the spouse. In this case, pursuing the ideal goal may feel good in the moment, but if the affair is discovered, it may lead to the end of the marriage, leading to feeling bad. Pursuing the ought goal of remaining faithful may feel unpleasant in the moment but lead to less suffering for both the individual and spouse in the long term. Again, it is not so simple to define which choice is "better," and what is "better" depends on one's values.

Does approach motivation always feel good? We propose that it does not. On one hand, the relationship between approach motivational intensity and pleasantness is often curvilinear. The approach-motivational state of mild hunger may feel pleasant when one anticipates a delicious meal in a short time, but intense hunger feels very unpleasant. Similarly, mild social motivation feels pleasant when one anticipates spending an evening with good friends, but intense social motivation (loneliness, grief) feels highly distressing. Panksepp's (1998) term for the social motivation system of social animals is PANIC/GRIEF, after the responses of infant animals during maternal separation. This unpleasant approach-related state motivates searching and distress vocalizations (crying) intended to restore proximity to the mother.

On another hand, approach motivation may relate directly to unpleasant feelings. Anger is approach-related emotion that does not feel subjectively positive (Harmon-Jones, Harmon-Jones, & Price, 2013). Anger is commonly evoked

by goal-blocking or the termination of positive reinforcers and mobilizes approach motivation as the organism tries to regain the goal (Carver & Harmon-Jones, 2009). Anger may also directly evoke approach motivational inclinations (Harmon-Jones & Harmon-Jones, 2016). Participants report that anger feels unpleasant, although individual differences exist in how unpleasant it is perceived (Harmon-Jones, Harmon-Jones, Amodio, & Gable, 2011). And these individual differences in how unpleasant anger is perceived do not relate to the degree of approach motivation of anger (Harmon-Jones, 2004).

Anger and aggression are often conflated, but aggression can be motivated by several different factors. This is in contrast to what the target article proposed when it stated that "a fight response to threat is typically considered an approach motivation" (p. 119). Animal behavior researchers have long noted a distinction between offensive and defensive aggression (Adams, 2006; Blanchard & Blanchard, 1984). Offensive aggression is regarded as being motivated by approach motivation: The animal will attack even if escape is possible. One way to evoke offensive aggression is to place an intruder into the home cage of another rodent (resident-intruder paradigm). One of the most dramatic illustrations of offensive aggression is when rats will endure the pain of running across an electrified grid to attack another rat (Lagerspetz, 1969). Defensive aggression is regarded as being motivated by avoidance motivation (fear): The animal will attack only if it is unable to escape, and the attacks are punctuated by attempts to escape.

Consistent with the idea of offensive aggression being related to approach motivation, one study selected mice according to whether they had a high or low exploratory temperament. As expected, mice high in exploratory temperament showed less anxiety in a light/dark task and the elevated plus maze, more locomotion in an open field, and superior performance across trials in an appetitive stimulus maze compared with mice low in exploratory temperament. When mice high in exploratory temperament were exposed to an intruder, they became aggressive, whereas mice low in exploratory temperament behaved in a nonaggressive or submissive manner (Kazlauskas et al., 2005).

Conclusion

To conclude, we applaud the target article for presenting a more nuanced view on the functions of approach and avoidance motivation and pointing to the importance of divorcing approach/avoidance motivation from positive/negative consequences/feelings. However, we believe that it does not go broadly enough in presenting a model that fully encompasses the constructs and applies to nonhuman as well as human animals, goals as well as impulsive urges, and conscious and unconscious motivational states.

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