

## Emotion Review

## Parkinson Commentary on Moors

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Abstract:	Moors and colleagues' clever studies demonstrate that goal-relevant stimuli can produce rapid, unintentional affective priming, but not necessarily that primes are compared with goal representations following onset. Instead, prior attunements based on changing concerns may prespecify reward value. Even if both these processes count as emotion-relevant appraisal, none of the evidence rules out appraisal-independent emotion under other unsampled circumstances, including those where emotions develop as cumulative responses to unfolding and responsive environments rather than as momentary reactions to briefly presented simple stimuli. Although the functional relations between inputs and outputs may imply "constructive" processes at one level, these processes may be implemented by sequential lower-level mechanisms.



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RUNNING HEAD: Recognizing Desirability

Recognizing Desirability: Is Goal Comparison Necessary?

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For Peer Review

## Abstract

Moors and colleagues' clever studies demonstrate that goal-relevant stimuli can produce rapid, unintentional affective priming, but not necessarily that primes are compared with goal representations following onset. Instead, prior attunements based on changing concerns may prespecify reward value. Even if both these processes count as emotion-relevant appraisal, none of the evidence rules out appraisal-independent emotion under other unsampled circumstances, including those where emotions develop as cumulative responses to unfolding and responsive environments rather than as momentary reactions to briefly presented simple stimuli. Although the functional relations between inputs and outputs may imply "constructive" processes at one level, these processes may be implemented by sequential lower-level mechanisms.

Recognizing Desirability: Is Goal Comparison Necessary?

The emotional power of events depends on their relation to a person’s current goals, actions, or concerns. For some theorists, this fact implies that individuals can only respond emotionally to stimuli after appraising the relevant relational information (e.g., by comparing events with goals). If appraisal only implies input-output connections at a functional level, there is little to contest here. However, important empirical issues remain about the precise nature of the processes involved. Moors and colleagues’ careful research goes some way towards addressing these issues, albeit in highly restrictive experimental contexts. Whether their findings effectively dispel deeper concerns about the viability of appraisal theory under different circumstances is another matter.

In 1980, Zajonc presented experimental evidence concerning unconscious effects on affect-relevant outcomes as part of a critique of the idea that emotion must always be post-cognitive. The research reported in Moors’ paper offers a belated response to this now-discredited argument. In 1987, Leventhal and Scherer pointed out that Zajonc’s evidence only supported the possibility of cognition-independent affect under restrictive definitions of cognition and inclusive definitions of emotion (see also Parkinson & Manstead, 1992). As everyone now acknowledges, unawareness of information processing does not rule out all kinds of cognition or “appraisal.” Correspondingly, differences in evaluative ratings of simple stimuli do not usually count as genuine emotional responses anyway.

Contrary to Zajonc, Moors uses evidence that automatic processes can generate affect-relevant outcomes to defend rather than attack appraisal theory. For her, showing that information can be combined rapidly and unintentionally, bringing consequences for affect-related cognition, helps to bolster the argument that emotions depend on appraisals even when their elicitation is automatic. However, Moors and colleagues’ evidence, like Zajonc’s, is susceptible to definitional dispute. Indeed, a sceptic might well argue that the

“constructive” processes manipulated are not really appraisals or at least not appraisals that are strong enough to elicit emotion. Further, Moors herself explicitly acknowledges that the obtained outcomes are not genuinely emotional outcomes. What precisely do the experiments tell us, then?

Moors argues that priming depends on processes specifically initiated by presentation of the prime, and that this stimulus requires constructive “appraisal” before any affective significance can be extracted. For example, participants only appreciate the evaluative significance of a cue indicating success after comparing its representation with a retrieved memory of their current goal. Thus, rapid or unintentional evaluative effects in response to such cues show that constructive (i.e., input-combining) processes can occur automatically.

But does the fact that the experimental method involves controlled momentary presentation of a specific stimulus necessarily mean that all the relevant action occurs only after that stimulus is presented? Having a goal typically implies pursuing actions that are already oriented to certain features of the environment, and the goal prespecifies these features as desirable or undesirable. For example, if I am trying to press a button when Y (indicating “yellow”) shows in a display of rapidly alternating letters (Moors & De Houwer, 2001), then I quickly become attuned to the corresponding colour in advance of any feedback about success or failure. Further, knowing that yellow indicates success orients me specifically to that colour’s appearance at the feedback phase. If yellow does appear, there is no need to compare the stimulus with a retrieved representation of the current goal, because the goal itself is already guiding my attention and action (yellow is already what I am hoping for). Similarly, when a jammed door opens when pushed harder there is no need to compare the outcome with the goal, because pushing was already directed at opening the door. In what sense then, does this involve a constructive process, let alone a constructive appraisal?

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Moors and colleagues’ creative variations of priming and feedback procedures systematically attempt to rule out specific alternative interpretations of experimental results, but fail to dispel all interpretational ambiguities. For example, Moors, De Houwer, and Eelens (2004) show that priming works even advance information only tells participants what category will be rewarded, and not which exemplar will cue success. However, this finding only seems to demonstrate that people can attune themselves to categories as well as specific stimuli, which can then be automatically categorised when presented.

In a more elaborate study, Moors and colleagues (2004) find an absence of priming in response to periodic reverse feedback when the category label corresponding to previously rewarded exemplars now indicates failure. However, this only seems to demonstrate limits to how quickly the focus of action can shift in response to complex contingencies (and corresponding limits to the scope of automatic appraisal, see Winkielmann & Schooler, 2008).

The study supposedly demonstrating automatic constructive appraisal of coping potential has similar limitations. If I am trying to escape from a ghost in a Pacman-style game, I don’t need to compute that the appearance of a wall represents low coping potential in order to detect the outcome’s undesirability. I am simply trying to get away and don’t like it when I can’t.

Setting aside these inevitable interpretational issues, even if Moors’ studies did demonstrate that constructive appraisals of goal congruence or coping potential can occur automatically, what implications would this bring for appraisal theory? Few would dispute the claim that emotions can be produced (or at least influenced) by various cognitive processes classifiable as appraisals. The present evidence suggests at best that some of these potentially emotion-influencing processes may occur automatically. But do all or most

emotions depend on prior appraisals, whether automatic or controlled, implicit or explicit, unconscious or conscious?

In my view, the belief in consistent appraisal dependence is based on fallacious logic rather than empirical evidence (Parkinson, 2009). Because emotions embody relational information, some theorists assume that this relational information must be extracted from a transaction before emotion can be generated. For example, because anger implies external blame, it is thought that individuals need to detect blameworthiness before arriving at this emotion. But people can push harder against a jammed door without having to recognise that it represents an obstacle to the goal of getting through. Analogously, blaming can develop as an ongoing adjustment to growing interpersonal resistance rather than a momentary detection of this resistance. More generally, emotions may depend more on appraisals when they are reactions to momentary meaningful stimuli as manipulated in a controlled experiment than when they emerge as unfolding reactions to a responsive social environment in the real world outside the laboratory.

These points imply that one possible reason for subscribing to some versions of appraisal theory is mistaken. But do they disprove appraisal theory? No more than the limitations of one possible reason for rejecting appraisal theory validate it. The serious empirical questions about the specific, disparate processes that activate and shape emotions still remain, regardless of whether the functional relationships between upstream person-environment transactions and downstream emotional outcomes are subsumed under the generic label of “appraisal” or not.

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