Integrating automatic processes into theories of relationships
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Dual-process models can inform the three influential theories of relationships highlighted by this volume. We focus specifically on how the automatic/implicit processes described by the MODE model can illuminate how satisfying relationships so frequently become unsatisfying despite people’s strong motivations to protect desirable beliefs. Our review suggests that: automatic partner evaluations are less susceptible to motivated biases and thus may better track relational rewards and costs and predict explicit evaluations as suggested by interdependence perspectives; implicit measures should better capture evolved partner preferences and thus should provide stronger support for evolutionary perspectives; and implicit measures more accurately capture the automaticity of the attachment system and thus may provide stronger tests of predictions derived from attachment theory.

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Research in the tradition of the three theoretical perspectives highlighted by this issue (interdependence theory, evolutionary perspectives, and attachment theory) has relied largely on explicit self-reports to measure the constructs specified by those theories. Yet, research outside the domain of close relationships has incorporated automatic cognitive processes not always captured by such reports into models of social processes [1]. We argue that integrating these dual process perspectives into theories of relationships will provide a better understanding of close relationships.

All three theoretical perspectives highlighted in this volume emphasize the importance of perceptions and behaviors to close relationships [2]. Fazio’s MODE model [3*] is particularly well-suited to demonstrate the importance of dual-process conceptualizations for understanding both. According the MODE model, Motivation and Opportunity Determine whether attitudes guide perceptions and behaviors spontaneously, or more deliberately. The starting point for any judgment or behavior is the attitude that is automatically activated upon perception of the attitude-object (e.g., one’s partner). If such automatic attitudes are strong, as automatic evaluations of a romantic partner are likely to be, and if motivation or opportunity to behave and think otherwise is low, automatic attitudes guide responding; that is, they orient attention toward the object, influence construal of the situation in attitude-consistent ways, and ready responses that lead to attitude consistent behaviors and judgments. Given sufficient motivation and opportunity to respond otherwise, however, a more deliberate decision-making process ensues, in which people consider the costs and benefits of particular courses of action before rendering judgment or enacting behavior.

In the remainder of this article, we review recent work on implicit social cognition in romantic relationships to highlight the benefits of incorporating these basic tenets of the MODE model into all three major theories of relationships. We approach this endeavor with the goal of shedding light on a theoretically puzzling question: why do romantic relationships so frequently transform from satisfying to unsatisfying? On the one hand, we know that people possess numerous effective cognitive strategies for maintaining beliefs that are important to them [4]. Indeed, self-perceptions, political attitudes, and prejudice are all fairly impervious to change. But on the other hand, in stark contrast to such stability, romantic relationship beliefs are frequently anything but stable. Not only do almost 50% of U.S. marriages end in divorce [5], even the large majority of spouses in relationships that remain intact experience declines in satisfaction [6]. We argue that considering implicit social cognition in the context of each major theory of relationships offers insight into these theoretically perplexing changes.

Implicit social cognition and interdependence theory
Interdependence theory [7,8] posits that intimates’ derive evaluations of their relationships from their perceptions of their rewarding versus costly experiences. All else being equal (i.e., ignoring the role of preferences for now), reward/cost ratios determine evaluations of the relationships. Of course, people experience numerous relationship rewards and costs, making the determination of the ratio ambiguous and, hence, susceptible to motivated
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reasoning [9]. Indeed, most people are positively biased regarding perceptions of their partners’ qualities [10,11]. In other words, at any given time, motivated reasoning can create a disconnect between intimates’ relationship experiences and their explicit evaluations of those experiences.

Nevertheless, although such positive biases can help sustain satisfaction over time [12], most romantic relationships either end or become less satisfying. Why do such biased perceptions not last? We contend that the MODE model can be used to understand such change. Whereas deliberative responses, such as explicit reports of relationship satisfaction, are susceptible to the biasing effects of motivations, such as the desire to see one’s partner in a positive light, automatic evaluations upon which those deliberative processes frequently rest are less affected by such motivations. Indeed, attitude formation and change research indicates that people automatically — without awareness or intention — learn associations between valued events and contiguous objects in ways that manifest as automatic evaluations of those objects [13,14]. In fact, people’s implicit tallying of positive and negative associations to objects appears to be more accurate than their explicit tallying, particularly as the information set increases in size [15,16]. In other words, people’s automatically-activated attitudes may more accurately reflect the accumulated experience of positive and negative outcomes associated with an object than their more deliberately-derived attitudes. In the context of a close relationship, then, intimates’ automatic relationship evaluations should be more responsive to the rewards and costs that accumulate over the course of their relationship. Although the motivation to perceive the relationship positively may help intimates’ defend their explicit evaluations against any negative automatic evaluations when they have the opportunity (e.g., cognitive resources) to do so, the MODE model posits that such motives are rendered impotent in the absence of opportunity. Over the course of any long-term relationship, there are inevitable times of stress [17] that will deplete resources [18,19] and thereby allow negative automatic attitudes to directly affect deliberate, explicit evaluations and behaviors.

A path diagram applying this MODE framework to interdependence theory appears in Figure 1. As represented by path a, rewarding and costly experiences directly influence intimates’ automatic evaluations of the relationship. As represented by path b, these automatic evaluations guide more deliberate interpersonal processes, such as explicit relationship satisfaction and dissolution. As represented by path c, however, this process can be moderated by intimates’ motivation to see the relationship in a positive light, which can lead to a disconnect between intimates’ automatic and explicit evaluations. Crucially, though, as represented by path d, the extent to which motivations disrupt the connection between intimates’ automatic and explicit evaluations depends on their opportunity to do so (e.g., stress/self-regulatory resources).

A growing body of research supports these predictions. Consistent with the idea that automatic evaluations are more sensitive to rewards and costs than are more explicit reports, Murray et al. [20] demonstrated that partners’ behavioral tendencies toward each other, as indicated by a daily diary, predicted their automatic but not explicit evaluations of the relationship over four years. Likewise, McNulty et al. [21**] recently demonstrated that intimates implicit self-evaluations, which are partially responsible for constructive interpersonal behaviors [22], also predicted automatic but not explicit partner
evaluations over the course of several years. Consistent with the idea that motivations can block the link between automatic and controlled processes, Scinta and Gable [23] demonstrated that people who were the most motivated to value their relationship (those with the fewest alternatives) were the most likely to report explicit relationship satisfaction scores that were high relative to their automatic partner evaluations. Finally, several studies demonstrate that initial implicit evaluations predict behavioral responses and changes in deliberative evaluations. Lebel and Campbell [24] reported that implicit partner evaluations indirectly predicted dissolution through explicit reports of relationship satisfaction. Likewise, Lee et al. [25] reported that positive implicit partner evaluations predicted lower risk of dissolution over 12 months in two samples. Although higher explicit satisfaction also predicted less dissolution in one study, it failed to predict dissolution in the other. McNulty et al. [26**] demonstrated that implicit evaluations were unrelated to explicit evaluations initially, but ultimately predicted changes in explicit marital satisfaction over four years whereas explicit evaluations did not. Finally, consistent with the idea that automatic evaluations should be particularly likely to predict deliberative responses when motivations to do otherwise are low, Lebel and Campbell [27] reported that low implicit partner evaluations were only associated with negative behaviors toward partners on days when their explicit evaluations were low.

**Implicit social cognition and evolutionary perspectives**

Perceptions of rewards and costs are not the only factors that affect relationship evaluations; people’s preferences, or what they ideally want from their relationships, also matter — that is, intimates evaluate their experiences in light of their preferences. The second class of theoretical perspectives highlighted in this issue, evolutionary perspectives, suggests some preferences reflect evolved adaptations, such that people prefer aspects of relationships and partners that are most adaptive for reproduction and child-rearing, which thus vary to some extent based on biological sex.

Parental investment theory [28] is frequently used to argue for two of the frequently-studied sex differences in preferences: given their higher levels of obligatory investment for reproduction, women should prefer partners with qualities indicative of the ability to acquire and invest resources whereas given that fertility in women is limited, men should prefer partner qualities indicative of fertility. Indeed, men and women do self-report different preferences explicitly [29]. According to both interdependence perspectives and evolutionary perspectives [30,31], such preferences should lead men and women to differentially evaluate relationships in which partners possess such qualities.

Nevertheless, the empirical evidence on this front is mixed. Although several recent studies suggest that women (compared to men) choose and/or positively evaluate partners with status and resources and men (compared to women) choose and/or positively evaluate partners who are physically attractive [6,32], other recent empirical work [33,34], as well as a recent meta-analysis [35], suggests such sex differences are rather weak and/or non-existent. The disconnect between what people report wanting in a partner and their actual mate choices and evaluations led Eastwick and Finkel [33] to suggest that people may lack introspective awareness of what they want in a partner.

One reason for these inconsistencies may be that most research has relied on explicit self-reports of people’s ideal preferences. As depicted in Figure 2, the MODE model can be used understand why relying on explicit self-reported preferences may lead to inconsistencies. To the extent that certain preferences for partner qualities evolved, they likely exist at a more automatic level and thus are best captured by implicit measures, as represented by path a. Indeed, automatic responses are more attuned to gut-level feelings than to the deliberate reasoning that tends to involve the cortical areas of the brain [36]. Although self-reports may sometimes reflect such gut-level desires, as represented by path b, motivational factors may interfere with people’s self-reported preferences, as represented by path c. For example, women taught they should not depend on men for resources may be motivated to explicitly report that a mate’s earning potential is unimportant to them, and men wishing to believe that beauty is only skin deep may be motivated to devalue a mate’s physical appearance. Of course, as represented by path d in Figure 2, opportunity factors may further moderate this link. For example, explicit measures completed under cognitive load may more strongly reflect evolved preferences and thus better predict relationship outcomes. It is worth noting that Eastwick and colleagues [37] actually found no sex differences in implicit measures of partner preferences for physical attractiveness, which better predicted partner choices than explicit measures. But it is also worth noting that their implicit measures contained words (e.g., ‘sexy,’ ‘attractive’) rather than visual representations, and visual representations may better activate automatic evaluations of visual stimuli [23,38,39].

In sum, like implicit measures of relationship evaluations, implicit measures of partner preferences may bypass motivational factors and thus more purely capture intimates’ preferences. Evolutionary and interdependence perspectives can both be used to argue such preferences should ultimately determine the impact of costly and rewarding experiences on positive or negative evaluations (i.e., moderate path a of Figure 1), but whether such moderating effects are driven by automatic or explicit preferences likely also depends on motivation and opportunity factors.
Implicit social cognition and attachment theory

Dual process perspectives have already influenced theory and some empirical work on the third theory highlighted by this volume, attachment theory. Just as the MODE model posits that perceptions of an attitude object automatically activate evaluations of that object, recent conceptualizations of attachment-related dynamics [40] posit that security-related situations automatically activate the attachment system. Further, just as automatic attitudes, according to the MODE model, guide subsequent responding depending on various factors, such conceptualizations posit that the activated attachment system leads to a sequence of cognitive and behavioral processes that vary across people, depending on their level of security.

Yet, despite the automatic nature of attachment system activation, the large majority of work on adult attachment has relied on explicit self-report measures of attachment. From the perspective of the MODE model, this may be problematic, as can be inferred from Figure 3. Consistent with theorizing on attachment, experiences that determine one’s automatic attachment security are represented by path a. However, the extent to which people’s responses to explicit measures align or conflict

Figure 2

Evolved Biological Factors → Automatic Preference → Explicit Preference

Opportunity Factors → Motivating Factors

Figure 3

Security-Relevant Experiences → Automatic Attachment Security → Explicit Attachment Security

Opportunity Factors → Motivating Factors

Integrating MODE principles into evolutionary perspectives on relationships.

Integrating MODE principles into attachment theory.
with these automatic responses, as represented by path b, should depend on people’s motivation to present or even see themselves in a particular light, as represented by path c. For example, various contextual or individual difference variables are likely to motivate some people with automatic insecurities to hide or ignore those tendencies, which may affect their responses to self-report measures, at least when they have sufficient resources. Accordingly, self-report measures of attachment may conflate motivational factors with automatic responses.

Some recent research has adopted implicit measures of attachment [41–43]. For example, Fraley and Marks [41] reported that avoidant individuals were quicker to push away in response to ‘Mom,’ compared to neutral word baseline trials. Hence, peoples’ reaction times to engage in either approach or avoidance behaviors in response to attachment-relevant concepts provides a window into their attachment tendencies unfettered by their fluency in describing them (i.e., opportunity) or their motivation to present themselves in a particular light. Although working from the standpoint of insecurity more generally, Murray and colleagues [44**,45**, 46] demonstrated the importance of implicit measures of trust, which are likely central to conceptualizations of attachment security. Indeed, such measures predict responding in ways consistent with the MODE model. For example, Murray et al. [44**] demonstrated that automatic inclinations to trust the partner interacted with explicit trust and self-regulatory resources to predict responding, such that automatic trust was positively associated with intimacy-seeking even among people who explicitly reported less trust when self-regulatory resources prevented such untrusting motivations from overriding implicit trust (for relevant discussion, see [47]).

Summary

As this review illustrates, research on implicit social cognition informed by dual-process models can provide insight to the three influential theories of relationships. Given they are less influenced by motivated biases, automatic partner evaluations may better track and predict relationship outcomes. Evolved mate preferences likely operate at an automatic, implicit level. And, attachment security generally and trust in a partner specifically seem to be separable into automatic and controlled components. Implicit measures will allow researchers to consider and measure both the automatic and controlled aspects of critical variables of all three major theoretical orientations, and, upon integrating such processes with the tenets of dual process perspective such as the MODE model, provide a fuller understanding or intimate relationships (for reviews of implicit measures that may be adapted to capture the processes outlined here, see [48,49,50**]).

References and recommended reading

Papers of particular interest, published within the period of review, have been highlighted as:

- of special interest
- of outstanding interest


This chapter provides the most recent overview of the MODE model and review of related research.


This article shows that relationship satisfaction decreases over four years on average among 916 new spouses.


26. McNulty JK, Olson MA, Meltzer AL, Shaffer MJ: Though they may be unaware, newlyweds implicitly know whether their marriage will be satisfying. Science 2013, 342:1119–1120. This study revealed that spouses’ automatic partner evaluations predicted changes in marital satisfaction over the first four years of marriage in a sample of 135 couples. Explicit partner evaluations did not predict changes in marital satisfaction.


46. This article describes research on the role of automatic partner evaluations in compensating for the insecurity common among intimates with low self-esteem.


