

Changes in the Valence of the Self as a Function of Mood

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The topic of the self has produced some of the most prolific investigations in social cognition. Representative empirical foci are the structural properties of the self (Higgins, Van Hook, & Dorfman, 1988; see Higgins & Bargh, 1987, for a review), the memorial, processing, and judgmental consequences of the self (for reviews, see Kihlstrom et al., 1987; Markus & Wurf, 1987), and the cognitive bases of trait self-descriptiveness judgments (Klein & Loftus, in press).

An additional empirical trend has sought to place the self in context, whether social, cognitive, or affective. The social context is composed of the physical or imagined presence of others. The cognitive context is broadly defined in terms of constructs stored in memory. Affective context refers to affective states. The affective context is of particular relevance to this chapter.

Research placing the self in affective context has taken two general directions. One direction explores the effects of the self on affective states. This line of research has generated several interesting findings. For example, discrepancies between the actual and the ideal self generate dejection-related emotions, whereas discrepancies between the actual and ought self engender agitation-related emotions (Higgins, 1987); self-complexity is associated with reduced negative affect (Linville,

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1987); and both upward and downward social comparison of the self to others can elicit either negative or positive affect (Buunk, Collins, Taylor, VanYperen, & Dakof, 1990).

The second research direction has explored the consequences of affective states and, more specifically, the consequences of mood for the self. The objectives of this chapter are to (a) review published experiments pertaining to mood effects on the self, (b) integrate these empirical findings in a theoretically parsimonious manner, and (c) point to new research directions. The overarching goal of the chapter is to clearly demarcate the focus of inquiry, methods, findings, and prospects of the emerging area of consequences of mood states for the self.

The review has implications for several issues of interest to self researchers. One implication concerns the issue of stability versus malleability of the self. Research has demonstrated the malleability of the self as a function of social context (Markus & Kunda, 1986; McGuire, McGuire, & Cheever, 1986; Schlenker & Trudeau, 1990) and cognitive context (Chaiken & Baldwin, 1981; Salancik & Conway, 1975). This review seeks to establish the malleability of the self as a function of affective (i.e., mood) context.

Demonstration that mood can lead to temporary changes in the self is of paramount importance. As Jones (1990) put it, "Temporary and trivial are not the same thing" (p. 71). Temporary changes in the self (i.e., the phenomenal self or working self, according to Jones & Gerard, 1967, and Markus & Wurf, 1987, respectively) can lead to fluctuations in self-esteem (Jones, Rhodewalt, Berglas, & Skelton, 1981; Rhodewalt & Agustdottir, 1986) and, most important, evoke alterations in expectations and behavior (Fazio, Effrein, & Falender, 1981; Harris & Snyder, 1986; Snyder & Swann, 1978).

The review also has practical implications. Understanding which aspects of the self are most amenable to change as a function of mood has intervention consequences. For example, aspects of the self (e.g., perceptions of self-efficacy, judgments of physical health, future planning) that are vulnerable to the effects of negative mood can be inoculated and further consolidated by therapists, relatives, or friends.

DEFINITIONAL CONCERNS

Next, I consider definitional issues regarding the two major terms used in this review: *mood* and the *self*

Defining Mood

The review is concerned with normal, everyday mood states. Wood, Saltzberg, and Goldsamt (1990, p. 900) defined *mood* as "a general and pervasive feeling state that is not directed toward a specific target." Schwarz and Clore (1988, p. 58) concurred that "a central characteristic of mood states is their diffuse and unfocused quality." Mayer and Salovey (1988, p. 88) thought of mood as "a feeling state (e.g., angry, happy, sad) that involves multiple psychological subsystems, including the hormonal, facial expressive, postural, and cognitive systems." Simon (1982, p. 335) stated that "mood provides a more general, non-interruptive context for cognition." Finally, Isen (1984, pp. 186-187) maintained that mood states "occur quite frequently, often in response to seemingly small everyday occurrences," and, in most cases, mood states

are not terribly attention-getting—even when they are having a pronounced effect on thought and behavior. Unlike strong emotion, these states do not interrupt our thought and behavior; rather, they gently color and redirect ongoing thoughts and actions, influencing what will happen next but almost without notice and certainly without ostensibly changing the context or basic activity.

In summary, mood states are frequent, relatively long and pervasive, but typically milder in intensity than emotions. As a result, they do not usually interrupt the regular thinking process; instead, they are unfocused and general (in contrast to emotions, which are object specific) and provide the context for subsequent cognitive activity. (For a noteworthy attempt to streamline mood as a distinctive and independent construct, see Morris, 1989.)

Defining the Self

Broadly defined, a person's self is the person's mental representation of information pertaining to him or her. More specifically, the self is defined in terms of its content and structure.

The content of the self is uniquely rich and diverse (Fiedler, 1990). It includes information about one's personality and behavioral characteristics, activities and important life events, physical qualities, demographic attributes, feelings, thoughts, goals, values, standards, rules for behavioral regulation, significant relationships with individuals, group

memberships, and possessions (Kihlstrom & Cantor, 1984; Markus, 1983). The content of the self is dynamic. It varies across cultures (Markus & Kitayama, 1991; Marsella, De Vos, & Hsu, 1985), and it is altered as a function of different social environments (e.g., home versus school; McGuire et al., 1986) and life transitions (Deutsch, Ruble, Fleming, Brooks-Gunn, & Stangor, 1988).

The content of the self has been described in terms of psychological dimensions such as well-being, sociability, competence, and unconventionality (Motimer, Finch, & Kumka, 1982) and also achievement-leadership, congeniality-sociability, masculinity-femininity, and adjustment (Monge, 1975). Self-conceptions can additionally vary in terms of their valence (i.e., negativity-positivity). The valence dimension is of particular relevance to this review.

Self-conceptions are interrelated. The structure of the self has been conceptualized as a schema (Markus, 1977), a hierarchy (Rogers, 1981), a prototype (Kuiper, 1981; Rogers, Rogers, & Kuiper, 1979), a location in multidimensional trait space (Breckler, Pratkanis, & McCann, 1991; Hoelter, 1985), and in terms of propositional memory networks (Bower & Gilligan, 1979; Kihlstrom & Cantor, 1984). Further, the self has been structurally subdivided into the private, public, and collective self (Greenwald & Pratkanis, 1984), the actual, ought, and ideal self (Higgins, 1987), and the desired versus undesired self (Ogilvie, 1987). Although the structure of the self is not directly pertinent to this review, the subject will be given additional consideration in a later section of the chapter.

CURVING THE SCOPE OF THE REVIEW

Having defined *mood* and *self*, I will now proceed to spell out clearly the scope and range of this review.

Concern for Causality

This chapter will review experiments that examine mood effects on the self. The review focuses exclusively on the effects of manipulated rather than natural mood, so that causal inferences regarding the relation between mood and the self can be drawn. All experiments included in this review randomly assigned subjects to mood conditions.

Restriction to Sad and Happy Moods

The review limits itself to experiments that manipulated sad versus happy moods only. There is a pragmatic reason for doing so, namely, availability of sources. Almost all experiments examining mood effects on the self have used sadness versus happiness as their mood manipulation.

There are additional reasons for constraining the review to sad and happy moods. Such moods are presumed to be omnipresent in everyday human functioning and to have powerful and profound consequences. Furthermore, this mood dimension has particular relevance to clinical phenomena. Sadness, for instance, is a primary correlate of depression.

Assessment of the Valence of the Self

The review will be exclusively concerned with the effects of mood on the valence of the self and specifically on the valence of (a) memories and judgments of one's own past or current personality, behavioral, and demographic characteristics; (b) goals or expectations involving the self; and (c) behaviors that are originated by the self and are directed toward the self (i.e., self-directed behaviors).

Why be preoccupied with the valence of the self? One reason is pragmatic. The vast majority of the research linking mood to the self has focused on the effects of sadness versus happiness on the valence of self-conceptions.

A second reason has to do with the omnipresence of the valence dimension in research on the self. Valence of the self determines, in part, the nature of interpersonal feedback that is accepted, the pattern of attributions about the self, choices and persistence in achievement-related tasks, and goal setting—to mention only a few domains of influence (for reviews, see Markus & Nurius, 1986; Strube, 1990; Swann, 1990; Taylor & Brown, 1988; for parallel findings demonstrating the prominence of the valence dimension in the perception and classification of environmental objects, see Abelson & Sermat, 1962; Eysenck, 1960; Hastorf, Osgood, & Ono, 1966; Osgood & Suci, 1955; Scherer, Koivumaki, & Rosenthal, 1972).

Certainly, the sad-happy and negative-positive dimensions deserve distinct conceptual statuses: one dimension is affective, the other is evaluative (Peeters & Czapinski, 1990). At the same time though, the

two dimensions share semantic and process similarities. They can arguably be subsumed under a general unpleasant-pleasant dimension. Further, they bear analogously pivotal consequences for human functioning. If sadness and happiness are likely to exert any effects on the self, such effects should be most prevalent in the case of self valence. At least, self valence would be a good place to begin studying the impact of sadness and happiness on the self.

Exclusion of Success Versus Failure Manipulations

The review does not include experiments that manipulated success versus failure feedback. Such manipulations have been shown to affect self-esteem (Cunningham, 1988b), self-competence (Kazdin & Bryan, 1971), expectations for future success or failure (Feather, 1966), and expectations for rewards that match previous success or failure (the "deservingness" norm; see Long & Lerner, 1974). Consequently, it is unclear whether the effects of success or feedback manipulations are due to (a) changes in self-esteem, competence, or expectations; (b) changes in mood states; or (c) some combination of these variables. (For a successful attempt to establish the independence of the mood and self-esteem constructs, see Heatherton & Polivy, 1991.)

THEORETICAL PERSPECTIVES ON MOOD

Two theoretical frameworks will be used to parsimoniously accommodate results of the literature pertaining to mood effects on self valence. These frameworks are the *mood congruency* and *mood incongruency* hypotheses.

Why restrict the review to these two formulations? Because much of the research in the extant literature has been conducted as a test of at least one of these two formulations. Pragmatic reasons notwithstanding, the two hypotheses are general and at the same time precise enough to accommodate most of the existing literature.

The two hypotheses will be pitted against one another. Granted, there have been reservations raised by several investigators concerning the value of between-theory testing as well as preferences expressed in favor of within-theory testing (Greenwald, 1975; Ostrom, 1977; Tetlock

& Levi, 1982). Between-theory testing, however, does serve the purposes of this review quite well. Framing the issues from a between-theory perspective has heuristic value, because it contributes to an elegant and all-encompassing summary of the extant literature. Additionally, between-theory testing has the potential of elucidating the effects of *sad* mood on self valence. (For an example of a between-theory attempt pitting mood congruency against mood incongruency, see Parrott & Sabini, 1990.)

Mood Congruency Hypothesis

General form of the hypothesis. The mood congruency hypothesis states that mood will affect the self in a congruent manner. That is, sadness will elicit negatively valenced, whereas happiness will evoke positively valenced, self-relevant cognitions (e.g., memories, judgments, expectations) and/or self-directed behaviors.

On mediation. What are the processes through which mood alters self valence? According to one line of reasoning, mood acts as a priming cue affecting retrieval of self-relevant information (Bower, 1981; Clark & Isen, 1982; Forgas, Bower, & Moylan, 1990; Isen, Shaker, Clark, & Karp, 1978). Upon induction, happy mood activates (Collins & Loftus, 1975) favorable self-relevant information in memory, and sad mood activates unfavorable self-relevant information. Thus mood-congruent material becomes more cognitively accessible. Subsequent judgments of the self will be based on the overly represented mood-congruent memories; as a result, self-judgments will also be mood congruent. Self-directed behaviors, to the extent that they are influenced by memory and judgments, will similarly be mood congruent.

Mood can also have its effects at the encoding stage of information processing. Mood renders evaluatively congruent interpretive concepts accessible in memory. New ambiguous information is encoded according to the most accessible and applicable concepts (Sedikides & Skowronski, 1991). Consequently, mood-activated concepts are most likely to be used for encoding of self-relevant information, resulting in mood-congruent selective encoding. Judgments about the self and self-directed behaviors are also likely to be mood congruent.

Another view on mediation, the cognitive priming view (see Riskind, 1983; as well as Mayer, Gayle, Meehan, & Haarman, 1990), asserts that it is not the affective quality of mood manipulations that produces the recorded results but their cognitive quality. That is, mood manipulations

are effective because of the information embedded in them. This information acts as a cognitive prime, activating semantically similar information in memory.

Additional attempts to explicate the processes through which mood exerts congruent effects on the valence of the self converge on the view that humans are motivated to maintain their current mood state, whether sad or happy. More specifically, one variant proposes that mood affects the self by inducing a general sense of sadness or happiness without necessarily the mediation of accessible and evaluatively similar information (Mischel, Coates, & Raskoff, 1968; Mischel, Ebbesen, & Zeiss, 1973, 1976). Ensuing judgments or behaviors will be geared toward maintaining this global sense of sadness or happiness. Another variant posits that, although people in a happy mood find their affective state pleasant and worth maintaining, people in a sad mood find their affective state unpleasant; however, sad mood people are energy depleted and thus incapable (at least for a relatively short time span) of engaging in any tedious cognitive or behavioral efforts to overcome it.

A hybrid variant can also offer some insight into the mechanisms through which mood affects self valence. Such a variant would accept that humans are motivated to sustain their current affective state but also suggest that the mechanisms humans employ to preserve affective consistency are cognitive in nature. Humans, when encountering information whose valence is mood incongruent, tend to activate mechanisms (at the attention, encoding, or retrieval stages) that are likely to suppress such information. Hence mood-incongruent information is undersampled and underrepresented in working memory.

A clarification. The purpose of the current review is *not* to distinguish among alternative mediating mechanisms. Indeed, the review does not have the potential to achieve this goal, because the relevant experiments were not conducted as crucial tests of alternative mediating mechanisms. Rather, the purpose of the review is to test the general form of the mood congruency hypothesis.

Mood Incongruency Hypothesis

General form of the hypothesis. The mood incongruency hypothesis posits that whether mood will affect the self in a congruent or incongruent manner depends on the nature of mood. A happy mood will exert congruent effects on self valence, eliciting positively valenced memo-

ries, judgments, expectations, or behaviors. A sad mood, however, will exert incongruent effects on self valence, evoking positively valenced (instead of negatively valenced) memories, judgments, expectations, or behaviors. In fact, a sad mood could even surpass the positivity of self valence elicited by a happy mood.

On mediation. What are the mechanisms through which mood might produce incongruent effects on self valence? Humans are assumed to be motivated to achieve and maintain a happy mood state, because it is pleasant and rewarding per se. People in sad moods will find their state aversive and will attempt to alleviate it in any of several ways. Thus they may block out mood-sustaining information at a preattentive stage (see Bargh, 1989, for an informative discussion). Alternatively, they may initiate (either consciously or nonconsciously) self-regulatory strategies (Frijda, 1986; Scheier & Carver, 1982) aiming at changing the undesirable affective states. Such self-regulatory strategies can be positive thinking, rationalization, or external distraction. Finally, people may act toward *themselves* in a way that directly counters the effects of sad mood. For example, they may engage in behavior that is directly self-rewarding. (For relevant treatises, see Clark & Isen, 1982; Fiske & Taylor, 1984; Isen, 1984.)

A clarification. It should again be clarified that the purpose of this review is *not* to test the mediating mechanisms of the mood incongruency hypothesis, given that primary-level experiments did not intend to accomplish this goal. Instead, the purpose is to test the general form of the hypothesis.

Pitting Mood Congruency Against Mood Incongruency

To recap, mood congruency and mood incongruency make indistinguishable predictions as far as happy mood is concerned. Both formulations predict that happy moods will increase self valence. The two hypotheses make opposing predictions, however, in the case of sad mood. The mood congruency hypothesis predicts decreases in self valence, whereas the mood incongruency hypothesis predicts increases in self valence. A finding where self valence becomes more positive in the case of sad than neutral and/or happy mood would be in line with the mood incongruency hypothesis.

EMPIRICAL EVIDENCE

This section of the chapter will detail the circumstances under which a result should be interpreted as supportive of mood congruency versus mood incongruency. Next, the section will examine empirical evidence directly relevant to the viability of the two hypotheses.

What Constitutes Support for Each Hypothesis?

A critical issue concerns the exact circumstances under which an empirical finding is taken as backing the mood congruency versus the mood incongruency hypothesis. In an attempt to specify these circumstances, several hypothetical designs will be described below, accompanied by interpretations of possible results.

The Case of Recall

2 x 2 designs. Imagine a 2 (mood: happy, sad) x 2 (self-relevant information: favorable, unfavorable) mixed-factors design, with the second factor being within subjects. After mood has been induced and *its presence verified* through manipulation checks, subjects are asked to recall information concerning the self. The mood congruency hypothesis would be supported if happy mood produced higher recall of favorable information than sad mood, and sad mood produced higher recall of unfavorable information than happy mood. On the other hand, the mood incongruency hypothesis would be supported if sad mood elicited higher recall of favorable and lower recall of unfavorable information than happy mood. The results would be nondiagnostic if no difference was observed between happy and sad mood in the amount of either favorable or unfavorable information recalled (see Table 11.1, Design I).

The above predictions would hold, with minor modifications, for designs manipulating either happy and neutral moods only or sad and neutral moods only. In the case of happy/neutral moods, happy mood leading to higher recall of favorable information and lower recall of unfavorable information than neutral mood would indicate support for the mood congruency hypothesis, whereas the absence of difference between happy and neutral mood in the amount of either favorable or unfavorable information recalled would be nondiagnostic (see Table 11.1, Design II). In the case of sad/neutral moods, the mood congruency hypothesis would be supported if a significant difference between sad

TABLE 11.1 Mood Congruency Versus Mood Incongruency: Hypothetical Designs, Possible Results, and Interpretations

Possible Result	Interpretation
Design I: 2 (mood: happy, sad) x 2 (self-relevant information: favorable, unfavorable) Mixed Factors	
HM leads to higher recall of FSI than SM, and SM leads to higher recall of USI than HM	Support for mood congruency
SM leads to higher recall of FSI and lower recall of USI than HM	Support for mood incongruency
No difference between HM and SM in the recall of FSI and/or USI	Results are nondiagnostic
Design II: 2 (mood: happy, neutral) x 2 (self-relevant information: favorable, unfavorable) Mixed Factors	
HM leads to higher recall of FSI and lower recall of USI than NM	Support for mood congruency
No difference between HM and NM in the recall of FSI and/or USI	Results are nondiagnostic
Design III: 2 (mood: sad, neutral) x 2 (self-relevant information: favorable, unfavorable) Mixed Factors	
SM leads to higher recall of USI and lower recall of FSI than NM	Support for mood congruency
SM leads to higher recall of FSI and lower recall of USI than NM	Support for mood incongruency
No difference between SM and NM in the recall of FSI and/or USI	Results are nondiagnostic
Design IV: 3 (mood: happy, neutral, sad) x 2 (self-relevant information: favorable, unfavorable) Mixed Factors	
HM leads to higher recall of FSI than NM, and NM leads to higher recall of FSI than SM; further, SM leads to higher recall of USI than NM, and NM leads to higher recall of USI than FIM	Support for mood congruency
SM leads to higher recall of FSI than NM and (possibly but not necessarily) HM; further, SM leads to lower recall of USI than NM and (possibly but not necessarily) HM	Support for mood incongruency
HM leads to higher recall of FSI than SM and NM (with the difference between SM and NM being nonsignificant), and SM leads to higher recall of USI than HM and NM (with the difference between HM and NM being nonsignificant)	Support for mood congruency
HM and SM lead to higher recall of FSI and lower recall of USI than NM (with the difference between HM and SM being nonsignificant)	Support for mood incongruency
No differences among HM, NM, and SM in the recall of FSI and/or USI	Results are nondiagnostic

NOTE: HM = happy mood; SM = sad mood; NM = neutral mood; FSI = favorable self-relevant information; and USI = unfavorable self-relevant information.

and neutral mood was obtained such that sad mood subjects recalled more unfavorable and less favorable information than neutral mood subjects. The mood incongruency hypothesis would be supported if sad mood elicited higher recall of favorable and lower recall of unfavorable information than neutral mood. Null results (i.e., no difference between sad and neutral mood in the amount of either favorable or unfavorable information recalled) would be nondiagnostic (see Table 11.1, Design III).

3 x 2 designs. Now imagine a 3 (mood: happy, neutral, sad) x 2 (self-relevant information: favorable, unfavorable) mixed-factors design, with the second variable treated as a repeated measures factor. For the mood congruency hypothesis to be supported, (a) happy mood should elicit higher recall of favorable information than neutral mood, with neutral mood evoking higher recall of favorable information than sad mood, and (b) sad mood should elicit higher recall of unfavorable information than neutral mood, with neutral mood eliciting higher recall of unfavorable information than happy mood. Conversely, for the mood incongruency hypothesis to be supported, (a) sad mood should lead to higher recall of favorable information than neutral mood and (possibly but not necessarily) happy mood, and (b) sad mood should elicit lower recall of unfavorable information than neutral mood and (possibly but not necessarily) happy mood. The results would be non-diagnostic if happy, neutral, and sad moods did not produce differential amounts of favorable or unfavorable information recalled (see Table 11.1, Design IV).

Several additional potential results of the 3 x 2 experiment are of theoretical interest. Consistent with the logic underlying interpretation of the outcomes of previous hypothetical designs (Table 11.1, Designs I, II, and III), results will be taken as supportive of the mood congruency hypothesis if happy mood elicits higher recall of favorable information than sad and neutral mood (with the difference between the latter two being nonsignificant) and sad mood elicits higher recall of unfavorable information than happy and neutral mood (assuming that the difference between the latter two is not significant). On the other hand, the results will be in line with the mood incongruency hypothesis if happy and sad moods lead to higher recall of favorable information and lower recall of unfavorable information than neutral mood (provided that the difference between happy and sad mood is not significant; see Table 11.1, Design IV).

Recall and Beyond

2 x 2 and 3 x 2 designs. The above noted interpretations would be generally applicable to the effects of mood induced at retrieval and to the effects of mood on additional dependent measures assessing the valence of self-relevant information that is attended to, the valence of judgments and expectations regarding the self, and the valence of self-directed behaviors.

A Caveat

As a reminder to the reader, the effects of happy mood alone are nondiagnostic with regard to mood congruency and mood incongruency. It is the effects of sad mood that are capable of discriminating between the two formulations. This discrepancy in the theory testing potential of sadness versus happiness has led to an important assumption underlying the entire review. According to this assumption, if there is evidence for mood congruency (or incongruency) operating in the case of sad moods, then that essentially constitutes evidence for mood congruency (or incongruency) for happy moods as well.

This assumption certainly lends parsimony to the review. Nevertheless, it should be acknowledged that the same process or mechanism does not necessarily have to operate under both sadness and happiness. Consequently, the effects of happiness are surrounded by some uncertainty regarding the underlying process or mechanism. This, of course, does not mean that the part of the review focusing on the effects of happiness on self valence is not useful. In fact, this part has the potential to yield important and interesting findings.

REVIEW AND DISCUSSION OF EMPIRICAL FINDINGS

I searched *Psychological Abstracts* (1970-1991) for experiments examining mood effects on the self. I used the following selection criteria. First, mood should be experimentally manipulated. Second, mood should not be induced through success and failure feedback. Third, the presence of mood should be verified through postinduction mood assessments. Fourth, the dependent measures should tap aspects

of the self in terms of attention, memory, judgment, goals/expectations, and/or behaviors.

I located 43 published reports. These reports contained 84 tests of the hypotheses. The tests correspond to dependent measures assessed. The reports and the tests can be found in Table 11.2.

There are several bits of information for each of the 84 tests provided in Table 11.2. The parent article is referenced, the mood induction procedure (e.g., Velten [1968], hypnosis, self-generated imagery) is listed, the mood induction (e.g., encoding versus retrieval) is recorded, and the design of each experiment is noted only with regard to mood (e.g., sad, neutral, or happy mood) and self-relevant information (favorable, unfavorable), when applicable.

Finally, the hypothesis supported by each test is indicated.

The results were overwhelmingly in favor of the mood congruency hypothesis. Specifically, of the 84 tests reported, 52 (62%) lent support to the mood congruency hypothesis, 10 (12%) favored the mood incongruency hypothesis, and 22 (26%) were nondiagnostic. The mood congruency hypothesis was supported irrespective of the particular mood induction procedure involved (e.g., Velten [1968], hypnosis, music, self-generated imagery) and regardless of whether mood was induced at the encoding (25 tests) or retrieval (27 tests) stage.

Strongest support for the mood congruency hypothesis was obtained for cognitive measures: attention, recall, judgments, and expectancies. Of the number of relevant tests (i.e., 72), 49 (68%) tests yielded results supportive of the mood congruency hypothesis, only 1 (1%) test favored the mood incongruency hypothesis, and 22 (31%) tests were nondiagnostic. Thus subjects in a sad mood (compared with subjects in a happy and/or neutral mood) attend more unfavorably to self-relevant information, recall higher amounts of unfavorable self-relevant information, judge the self

less favorably, and have more negative performance expectancies. The effects of mood on self-judgments and recall of self-relevant information are pervasive.

In contrast, it was the mood incongruency hypothesis that received

weaker support with regard to behavioral measures (i.e., self-

disclosure, self-reward, self-gratification). Of the total number of relevant tests (i.e., 12), 3 (25%) were in line with the mood congruency hypothesis, and the remaining 9 (75%) backed the mood incongruency hypothesis. Specifically, subjects in the experiments that supported the mood congruency hypothesis (a) had more intimate self-disclosures when in a happy than sad mood (Cunningham, 1988a), (b) praised themselves more and criticized themselves less when in a happy mood compared with either a neutral or a sad mood (Jones & Thelen, 1978), and (c) rewarded themselves with more money when in a happy mood as opposed to either a neutral or sad mood (Underwood, Moore, & Rosenhan, 1973). Subjects (mostly children) in the experiments that favored the mood incongruency hypothesis (a) rewarded themselves with more tokens when happy and sad compared with being in a neutral mood state (Baumann, Cialdini, & Kenrick, 1981); (b) were more likely to resist temptation, such as playing with a mobile, when in a happy rather than neutral or sad mood state (Fry, 1975); (c) chose immediate rewards when in a sad mood but chose delayed rewards when in a happy mood (Knapp & Clark, 1991; Schwarz & Pollack, 1977); and (d) indulged themselves with candies when in a happy and/or sad mood more so than when in a neutral mood (Rosenhan, Underwood, & Moore, 1974).

There may be several reasons for the outcome discrepancy between the cognitive and behavioral measures. First, it should be noted that relatively few experiments that included behavioral measures were available for the review. Thus conclusions regarding such measures must be made cautiously. Nonetheless, one explanation for the relative support for the mood incongruency hypothesis in the case of behavioral measures is that the impact of sad mood on self-directed behaviors became attenuated due to the mediation of a relatively large number of intervening (e.g., cognitive, situational, norm-related) variables. Another possibility is that sad mood initially produced mood-congruent effects, that is, negatively valenced self-conceptions; however, these effects were countered by the organism via mobilization (Taylor, 1991) and self-rewarding behavior. Mood affects self-relevant cognitions in a congruent manner but may affect self-directed behaviors in an incongruent manner.

A sizable minority of the tests produced nondiagnostic results. Of the 22 nondiagnostic tests, 16 (or 73%) were due to mood failing to affect self-related measures despite its presence as detected by manipulation checks. This attests to the relatively weak effects of mood on self valence. The remaining tests (6 or 27%) produced results that were hard to interpret under the rules specified in Table 11.1. For example, subjects in a happy mood recalled less information that was unfavourable

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TABLE 11.2 Research Testing the Hypotheses

Area	Experiment	Mood Induction Procedure; Timing of Mood Induction; Design ^a	Results	Hypothesis Supported
I. Attention	Mischel, Ebbesen, & Zeiss (1973, p. 139)	Imagery of tape-recorded scenes; encoding mood; 3 × 2	HM ^b Ss ^c spent more time attending to FSI ^d and less time attending to USI than NM Ss; NM Ss spent more time attending to FSI and less time attending to USI than SM Ss.	Mood congruency
II. Recall	A. Free Recall			
	Berkowitz (1987, Expt. 2)	Self-generated imagery; encoding mood; 2 × 2	HM Ss produced more FSI and less USI than SM Ss.	Mood congruency
	Bower (1981, Expt. 1)	Hypnosis; retrieval mood; 2 × 2	HM Ss recalled more FSI and less USI than SM Ss.	Mood congruency
	Bower (1981, Expt. 2)	Hypnosis; retrieval mood; 2 × 2	HM Ss recalled more FSI and less USI than SM Ss.	Mood congruency
	Brown & Taylor (1986)	Velten (1968), self-generated imagery; encoding mood; 2 × 2	HM and SM Ss recalled an equal amount of FSI. HMS recalled less USI than SM Ss.	Nondiagnostic results
	Bullington (1990)	Velten, music; retrieval mood; 2 × 2	HM Ss recalled more FSI and less USI than SM Ss.	Mood congruency
	Forgas, Bower, & Krantz (1984)	Hypnosis, self-generated imagery; encoding mood; 2 × 2	Mood produced no significant results.	Nondiagnostic results
	Laird, Cuniff, Sheehan, Shulman, & Strum (1989)	Facial expressions; retrieval mood; HM, SM, and ANGRY mood	HM Ss recalled more FSI than SM Ss. SM Ss recalled more USI than HM Ss but not significantly so.	Mood congruency
	Madigan & Bollenbach (1982, Expt. 2)	Velten; retrieval mood; HM, SM	HM Ss produced more pleasant associations to stimulus words than	Mood congruency

TABLE 11.2 Continued

<i>Area</i>	<i>Experiment</i>	<i>Mood Induction Procedure; Timing of Mood Induction; Design^a</i>	<i>Results</i>	<i>Hypothesis Supported</i>
	Salovey & Singer (1989, Expt. 2)	Self-generated imagery; retrieval mood; 3 × 2	HM elicited higher recall of FSI than either NM or SM; SM tended to elicit higher recall of USI than NM or HM.	Mood congruency
	Salovey & Singer (1989, Expt. 3)	Self-generated imagery; retrieval mood; 3 × 2	HM elicited higher recall of FSI than either NM or SM; SM tended to elicit higher recall of USI than NM or HM.	Mood congruency
	Snyder & White (1982, Expt. 1)	Velten; retrieval mood; 2 × 2	HM Ss recalled more FSI and less USI than SM Ss.	Mood congruency
	Teasdale & Taylor (1981)	Velten; retrieval mood; 2 × 2	HM Ss recalled more FSI and less USI than SM Ss.	Mood congruency
	Teasdale, Taylor, & Fogarty (1981)	Velten; retrieval mood; 2 × 2	HM Ss recalled more FSI and less USI than SM Ss.	Mood congruency
	Wright & Mischel (1982)	Self-generated imagery; encoding mood; 3 × 2	HM Ss recalled more FSI than NM Ss; NM Ss recalled more FSI than SM Ss. HM Ss recalled less USI than NM Ss; NM Ss recalled less USI than SM Ss.	Mood congruency
B. Recognition Memory				
	Forgas et al. (1984)	Hypnosis, self-generated imagery; encoding mood; 2 × 2	Mood produced no significant results.	Nondiagnostic results
	Natale & Hantas (1982)	Hypnosis, Velten; retrieval mood; 3 × 2	SM Ss discriminated less between FSI items than either Hm or NM Ss; however, mood did not affect the ability to discriminate between old and new USI and NSI.	Nondiagnostic results
	Siegel, Johnson, & Sarason (1979)	Velten; retrieval mood; 3 × 2	Mood had no effect on recognition.	Nondiagnostic

290 **TABLE 11.2** Continued

<i>Area</i>	<i>Experiment</i>	<i>Mood Induction Procedure; Timing of Mood Induction; Design^a</i>	<i>Results</i>	<i>Hypothesis Supported</i>
	Teasdale et al. (1981)	Velten; retrieval mood; 2 × 2	HM Ss took less time to retrieve FSI and slightly more time (not significantly so) to retrieve USI than SM Ss.	Mood congruency
III. Judgments				
A. Overall Self-Evaluations				
	Wright & Mischel (1982)	Self-generated imagery; encoding mood; HM, SM, NM	HM Ss rated the self more favorably than NM Ss; NM Ss rated the self more favorably than SM Ss.	Mood congruency
B. Self-Efficacy				
	Cunningham (1988b, Expt. 2)	Velten; encoding mood; HM, SM, NM	Mood did not affect self-perception of ability in social-passive tasks. Mood did not affect self-perception of ability in social-active tasks. Mood did not affect self-perception of ability in nonsocial-passive tasks. Mood did not affect self-perception of ability in nonsocial-active tasks.	Nondiagnostic results Nondiagnostic results Nondiagnostic results Nondiagnostic results
	Kavanagh & Bower (1985)	Hypnosis; encoding mood; HM, SM, NM	HM Ss made more positive and less negative self-efficacy judgments than NM and SM Ss.	Mood congruency
	Natale (1978)	Velten; encoding mood; HM, SM, NM	HM Ss scored higher on internality, whereas SM Ss scored higher on	Mood congruency

292 **TABLE 11.2** Continued

<i>Area</i>	<i>Experiment</i>	<i>Mood Induction Procedure; Timing of Mood Induction; Design^a</i>	<i>Results</i>	<i>Hypothesis Supported</i>
	Wright & Mischel (1982)	Self-generated imagery; encoding mood; HM, SM, NM	HM Ss reported higher evaluations of their performance than NM Ss; NM Ss reported higher evaluations of their performance than SM Ss.	Mood congruency
F. Self-Perception on Task-Relevant Attributions	Cunningham (1988b, Expt. 2)	Velten; encoding mood; HM, SM, NM	HM Ss reported more positive self-perception of energy in social-passive tasks than NM and SM Ss. HM Ss reported more positive self-perception of energy in social-active tasks than NM and SM Ss. Mood did not affect self-perception of energy in nonsocial-passive tasks. Mood did not affect self-perception of energy in nonsocial-active tasks.	Mood congruency Mood congruency Nondiagnostic results Nondiagnostic results
G. Appraisal of Physical Symptoms	Croyle & Uretsky (1987, Expt. 1)	Velten; retrieval mood; HM, SM	HM Ss judged their health more favorably than SM Ss.	Mood congruency
	Croyle & Uretsky (1987, Expt. 2)	Videotapes; retrieval mood; HM, SM	HM Ss judged their health more favorably than SM Ss.	Mood congruency
	Salovey & Birnbaum (1989)	Self-generated imagery; retrieval mood; HM, SM, NM	Mood affected reporting of ambiguous symptoms: SM Ss reported more aches, pains, and discomfort than HM Ss, with NM Ss falling in between.	Mood congruency

294 **TABLE 11.2** Continued

<i>Area</i>	<i>Experiment</i>	<i>Mood Induction Procedure; Timing of Mood Induction; Design^a</i>	<i>Results</i>	<i>Hypothesis Supported</i>
	Madigan & Bollenbach (1982, Expt. 1b)	Velten; retrieval mood; HM, SM, NM	HM Ss rated personal memories they generated as more pleasant than SM Ss. Neither HM nor SM Ss differed in their ratings from NM Ss.	Mood congruency
J. Time Spent Engaging in Positive or Negative Events	Snyder & White (1982, Expt. 2)	Velten; retrieval mood; HM, SM	HM Ss reported spending more time during the past week in pleasant activities and less time in negative activities than SM Ss.	Mood congruency
K. Stability Attributions for the Causes of Success	Brown (1984)	Velten; encoding mood; HM, SM	HM Ss perceived the causes of their successful performance as more stable than SM Ss; however, HM Ss did not perceive the causes of their failure as less stable than SM Ss.	Nondiagnostic results
	Forgas, Bower, & Moylan (1990, Expt. 2)	Videotapes; encoding mood; HM, SM, NM	HM and NM Ss made more stable attributions for their successes than their failures compared with SM Ss.	Mood congruency

L. Causal Attributions for Success and Failure Outcomes

Baumgardner & Arkin (1988)

Videotapes; encoding mood; HM, SM, NM

HM Ss made internal attributions for their successes to a higher degree than NM Ss, who in turn made internal

Nondiagnostic results

TABLE 11.2 Continued

Area	Experiment	Mood Induction Procedure; Timing of Mood Induction; Design ^a	Results	Hypothesis Supported
	Schwarz & Clore (1983, Expt. 1)	Self-generated imagery; encoding mood; HM, SM	PM Ss expressed more personal satisfaction and happiness with their life than NM Ss.	Mood congruency
	Strack, Schwarz, & Gschneidinger (1985)	Self-generated imagery; encoding mood; HM, SM	PM Ss expressed more personal satisfaction and happiness with their life than NM Ss (this finding held only when mood was induced by having Ss imagine <i>current</i> rather than past life events).	Mood congruency
	Strack et al. (1985, Expt. 2)	Self-generated imagery; encoding mood; HM, SM	PM Ss expressed more personal satisfaction and happiness with their life than NM Ss (this finding was observed only when mood was induced by having Ss imagine life events <i>vividly</i> rather than <i>pallidly</i>).	Mood congruency
	Strack et al. (1985, Expt. 3)	Self-generated imagery; encoding mood; HM, SM	PM Ss indicated more personal satisfaction and happiness with their life than NM Ss (this finding was only observed when mood was induced by having Ss describe how rather than why the event occurred).	Mood congruency

IV. Expectancies

A. Goal Setting

Wright & Mischel (1982)

Self-generated imagery; encoding mood; HM, SM, NM

Mood produced no significant effects.

Nondiagnostic results

B. Outcome Expectancies

TABLE 11.2 Continued

Area	Experiment	Mood Induction Procedure; Timing of Mood Induction; Design ^a	Results	Hypothesis Supported
V. Behaviors				
A. Self-Disclosure				
	Cunningham (1988a)	Videotapes; encoding mood; HM, SM	HM Ss self-disclosed more and longer to a partner than SM Ss.	Mood congruency
B. Self-Gratification				
	Baumann, Cialdini, & Kenrick (1981)	Self-generated imagery; encoding mood; HM, SM, NM	HM and SM Ss self-gratified more than SM Ss.	Mood incongruency
	Fry (1975)	Self-generated imagery; encoding mood; HM, SM, NM	HM Ss resisted temptation longer than NM Ss, who in turn resisted temptation longer than SM Ss.	Mood incongruency
	Jones & Thelen (1978)	Velten; encoding mood; HM, SM, NM	HM Ss rewarded themselves more than either NM or SM Ss. The latter two groups did not differ from one another. HM Ss punished themselves less than either NM or SM Ss, and NM Ss punished themselves less than SM Ss.	Mood congruency
	Knapp & Clark (1991, Expt. 1)	Guided imagery; encoding mood; HM, SM, NM	SM Ss were less able to delay gratification than NM and HM Ss.	Mood incongruency
	Knapp & Clark (1991, Expt. 2)	Guided imagery; encoding mood; SM, NM	SM Ss delayed gratification less than NM Ss.	Mood incongruency
	Moore, Clyburn, & Underwood (1976)	Self-generated imagery; encoding mood; HM, SM, NM	HM Ss made more delayed-reward choices than did NM Ss, and SM Ss made more immediate-reward choices than did NM Ss.	Mood incongruency
	Rosenhan, Underwood, & Moore (1974)	Self-generated imagery; encoding mood; HM, SM, NM	HM and SM Ss did not differ in terms of self-gratification; however, both	Mood incongruency

to the self compared with subjects in a sad mood, but subjects in both mood conditions recalled an equal amount of favorable self-information (Brown & Taylor, 1986). Or happy mood subjects made internal rather than external attribution for their successes (in comparison with neutral and happy mood subjects), but they also made internal attributions (as subjects in a sad and neutral mood state did) for their failures.

The current review uncovered symmetrical mood effects; that is, the effects of happy mood on self valence were the opposite of the effects of sad mood. Such a pattern has not always been obtained. Several experiments examining the impact of mood on non-self-related dependent measures (e.g., Fiedler, Pampe, & Scherf, 1986; Gotlib & McCann, 1984, Experiment 2; Hasher, Rose, Zacks, Sanft, & Doren, 1985; Isen, 1985; Mecklenbrauker & Hager, 1984) have yielded mood-asymmetrical results (see Taylor, 1991, for a review). Why does mood tend to elicit symmetrical effects on self-related measures but oftentimes asymmetrical effects on non-self-related measures?

Based on a review of the work by Mecklenbrauker and Hager (1984), Hasher et al. (1985), and Fiedler et al. (1986), Schwarz and Clore (1988) concluded that mood congruency effects "may be limited to relatively unstructured material and tend to be difficult to find when material is presented in narrative form, such that positive and negative elements are interconnected or otherwise well organized" (p. 46). Self-knowledge fulfills the requirements for obtaining mood congruency effects. It is unlikely to be tightly structured due to its richness, multidimensionality, and plasticity (Markus & Wurf, 1987); further, it is not, of course, presented to subjects, let alone presented in narrative form with positive and negative self-conceptions being structurally interconnected. It follows that whether one obtains mood-symmetrical versus mood-asymmetrical effects depends on the nature of the cognitive material associated with moods, with self-relevant material likely to yield mood-symmetrical effects (Blaney, 1986; Bullington, 1990; Forgas et al., 1990).

The review establishes that people in both a happy and a sad mood tend to maintain their affective states. This finding is not surprising as far as happy mood is concerned. As Isen (1984) observed, "positive affect is very common . . . [whereas] negative affect is more rare" (p. 187). Thus one can reasonably assume that most people are usually in a slightly happy mood state. Given the necessity of positive affect for effective everyday functioning (Lazarus, Kanner, & Folkman, 1980), people tend to maintain their mildly happy moods by engaging in mood-congruent thinking (e.g., activating positively valenced self-conceptions)

or behavior (e.g., engaging in positive self-directed behaviors, such as self-reward).

It is only because of disruptive and/or stressful life events that people delve into a temporary sad state (Isen, 1984). But how are sad mood states sustained? In part, by such activities as ruminating (Martin & Tesser, 1989), adopting a problem-focus strategy (i.e., consulting others about the unpleasant life occurrence), socializing with people in a similar affective state (Rosenblatt & Greenberg, 1991), or choosing likewise valenced activities (e.g., reading a sad book, listening to sad music, watching a sad movie).

Still, how do individuals ever manage to break their sad mood state? One possibility is that people take no particular action to snap out of their sad mood—it simply fades away, especially as a result of processing new information or engaging in new tasks. Another possibility is that people in a sad mood state unintentionally divert attention externally; sad thoughts and accompanying unfavorable thoughts about the self become diffuse, because of the impact of incoming information. Alternatively, people may focus attention on objects of personal significance, either social (e.g., friends, relatives) or nonsocial (e.g., valued possessions) and, as a result, neutral or favorable self-relevant thoughts become more accessible in memory than unfavorable thoughts (see Wyer & Srull, 1989). It is also possible that people make conscious decisions that maximize the chances of exiting the sad mood state, such as socializing, thinking thoughts that are generous to the self (Beck, Rush, Shaw, & Emery, 1979), making self-serving attributions (Kuiper, 1978), seeking explanations (Abele, 1985), or engaging in activities that are likely to breed a sense of self-worth and accomplishment (Diener, 1984). The time is ripe for future research to focus on the exact strategies people use to regulate their sad mood states.

CONCLUDING REMARKS

The main objective of this review was to define and establish the area of consequences of mood states for the self as an independent domain of investigation. As a first step toward this objective, the review examined empirical work on the changes occurring in the valence of the self as a function of mood. The review showed that self valence is affected by mood in a congruent manner. In so doing, the review affirmed the viability of the mood congruency hypothesis.

The relevancy of another theoretical view, the *mood as information* view, should also be entertained. This view (Schwarz & Clore, 1983, 1988) credits mood (and affect in general) with informative value. The experience of mood provides people with cues relevant to the evaluation of the situation in which they currently find themselves. For example, feeling happy cues people favorably, whereas feeling sad cues people unfavorably, toward a target. In either case, people use their perceived mood states as information to infer that they like or dislike the target.

On the face of it, the mood as information view would seem to account reasonably well for the obtained results—at least as well as the mood congruency hypothesis. Upon closer inspection, however, the mood as information view appears to be constrained in several regards. First, this view was offered as an alternative explanation for the effects of mood states on *evaluative judgments*, whereas the mood congruency hypothesis has a broader scope: It encompasses mood effects on attention, recall, recognition, retrieval latencies, expectancies, judgments, and behaviors. Second, to demonstrate experimentally the validity of the mood as information view, one will have to include a condition in which subjects are oblivious to the source of their mood (in which case the predictions of the mood as information view would be identical to the predictions of the mood congruency hypothesis) *and* also a condition in which subjects are led to attribute their mood to an environmental source (e.g., the weather, an unpleasant room). In the latter case, the mood as information view predicts that mood will be attributionally discounted, that is, it will not have any effects on judgments. Only 4 of the 78 tests reported in this review satisfied this latter crucial requirement. These four tests were by Schwarz and Clore (1983, Experiment 1) and Strack, Schwarz, and Gschneidinger (1985, Experiments 1, 2, and 3). Given the more extensive applicability of the mood congruency hypothesis and the limited experimental tests of the mood as information hypothesis, it is concluded that, currently, the mood congruency hypothesis provides a more comprehensive and adequate theoretical umbrella for the interpretation of mood effects on self valence.

This chapter demonstrated that mood has reliable effects on attention, memory, judgments, expectations, and behaviors regarding the self. This is testimony to the malleability of the self as a function of affective

context. The findings of the review qualify mood as a powerful determinant of temporary changes in the self.

Furthermore, the findings of the review have intervention implications. Given the potency of the effects of sad mood on the self, momentary fluctuations in the favorableness of self-evaluations as a function of mood would appear hard to prevent. One step toward prevention is to help individuals become conscious of the effects moods have on them. In corroboration of this suggestion, recent research has showed that the effects of mood are diminished when subjects' attention is directed toward their mood state (Berkowitz & Troccoli, 1990; Strack et al., 1985). Another form intervention might take is to cultivate effective coping strategies that individuals could activate and use after the occurrence of unfavorable self-evaluations. Such strategies could range from challenging the negativity of inferences about the self via selective recall of favorable self-relevant information to diffusing the lingering effects of mood on the self through engagement in externally oriented activities.

Having established mood congruency effects on the self, the final section of this chapter will explore fruitful avenues that research on the consequences of mood on the self can follow.

DIRECTIONS FOR FUTURE RESEARCH

Mood Congruency Hypotheses: Searching for Process Specificity

An important task for future research is to identify the mechanism(s) that best accounts for the influence of mood on the self. Several mechanisms were discussed under the heading "Mood Congruency Hypothesis." An additional mechanism might also be worth examining, namely, the possibility of differential mood effects on central (i.e., self-descriptive and important) versus peripheral (i.e., non-self-descriptive and unimportant) self-conceptions. Mood, for example, may be more likely to affect the self through peripheral rather than central self-conceptions, because peripheral self-conceptions are less likely to be resistant to change than central self-conceptions.

Mood Effects on the Structure of the Self

Future research needs to focus on whether mood produces structural changes in the self. Does mood change the structural interconnections of favorable and unfavorable self-relevant information? Does mood predominantly affect the public versus private self, the actual versus ideal self, and the desired versus undesired self?

Effects of Additional Mood Dimensions on the Self

The influence of additional mood states (e.g., anger, fear, disgust) on the self is worth exploring in the laboratory. Mood congruency effects may be obtainable with other mood states. As an illustration, a recent experiment that induced an angry mood (along with a happy and a sad mood) obtained mood-congruent effects, with angry subjects tending to retrieve anger-related personal life events from memory (Laird, Cuniff, Sheehan, Shulman, & Strum, 1989).

Final Recommendations

Future researchers will do well to adopt a more systematic approach in attempting to enhance our understanding of mood effects on self-perception. Whenever possible, a 3 (mood: happy, sad, neutral) x 3 (self-relevant information: favorable, neutral, unfavorable) design should be employed. The difficulties in defining neutral self-relevant information notwithstanding, such a design would provide a most rigorous evaluation of the mood congruency and mood incongruency hypotheses.

The effects of mood along different information processing stages would also need to be explored. How does mood affect initial self-categorization, the organization of new self-information in memory and its recall, and the retrieval of such information for self-evaluation purposes? To explore this, one could begin to investigate the effects of mood on such self-related measures as free-style self-descriptions, amount of recall and cognitive organization of self-relevant information, response times for feedback concerning the self, self-complexity, self-evaluative judgments with regard to personal and social standards, and social comparison attempts.

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