

An Emerging Understanding of the Reflective (Meta-) Experience of Mood

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The regulation of mood occurs at multiple conscious and unconscious levels. A conscious, self-reflective level of mood regulation is identified as one in which we are aware of both our mood and our thoughts about that mood. Thoughts such as "I shouldn't feel this way" and "I'm thinking good things to cheer up" come to mind at that level. Study 1 employs a multiple-domain, factor-analytic approach to determine the dimensions that best describe such reflective experience. Study 2's analyses cross-validate findings from Study 1 and correlate the major meta-experience factors with personality scales; several experiential styles of meta-experience are described. © 1994 Academic Press, Inc.

Consciousness has been referred to as the "front page" of the mind because it contains information selected by attentional subsystems of special interest to the organism (Ornstein, 1986, p. 64; Wegner, 1989, p. 52). A working, cognitively oriented definition of consciousness is that it concerns the set of mental contents of which a person is aware (Ellis & Hunt, 1993, p. 50; see Natsoulis, 1984, for a more extensive discussion). Normal waking consciousness, in contrast to unconscious processing, is highly synthesized, often containing complete images and propositions rather than communications from fragmented sources (Dennett, 1978; Fodor, 1983; Minsky, 1985, p. 56). Consciousness is also more capable of the connected, extended processing required for logical responses to significant problems and complex environments (Greenwald, 1992).

Mood regulation occurs at multiple conscious and unconscious levels. At a highly self-reflective level of mood regulation, we are aware of both our mood and our thoughts about that mood (our meta-experience of it;

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Mayer & Gaschke, 1988). Some reflective thoughts on mood include "I shouldn't feel this way," "I'm not sure how I'm feeling," and "I'm thinking good things to cheer up." A more restricted awareness may include fleeting thoughts we have to distract ourselves from the mood (e.g., "Don't think about it"; Mayer, Salovey, Gomberg-Kaufman, & Blainey, 1991; Tart, 1975, p. 15). Below this level occur a wide set of automatized defense and coping mechanisms that regulate that mood (Freud, 1946; Erdelyi, 1985; Mauro, 1992; Solomon, 1980; Speisman, Lazarus, Mordkoff, & Davison, 1964; see Koriat, Melkman, Averill, & Lazarus, 1972, for experimental demonstrations).

Conscious regulation of emotion becomes important when a person judges his or her emotional reactions as maladaptive—a fairly common occurrence given people's complex social/behavioral field. For example, a parent may need to consciously regulate his or her anger at a child, should such feeling conflict with the child's best interest. Conscious mood regulation has been studied by both clinical and other psychologists interested in how self-talk and other procedures can alter emotions (Beck, 1967; Ellis, 1962; Meichenbaum, 1977; Morrow & Nolen-Hoeksema, 1990; Rehm *et al.*, 1981; see Klinger, 1993, for a review), as well as by experimental psychologists interested in specific strategies of mood change such as thought stopping (Carver & Scheier, 1990; Wegner, 1989; Wenzlaff, Wegner, & Roper, 1988), catharsis (Pennebaker, 1989), distracting oneself with one's work (Erber & Tesser, 1992), and goal-setting (Baumeister, Heatherton, & Tice, 1992).

Processes related to *unconscious* mood regulation are already well known. For example, repression-sensitization and related dimensions describe a continuum that extends from the automatic repression of feelings at one end, to an all-absorbing focus on feelings at the other (Byrne, 1961; Weinberger, 1990). The present paper complements this work by further studying conscious mood regulation. Conscious attempts to regulate mood result from a variety of factors related to the experience of the mood and to personality itself.

The present studies develop integrated measures of people's evaluations of and regulatory interventions in their moods, so as to better understand how such characteristics relate to personality. This is achieved by devising separate scales of mood evaluation and regulation in Study 1, and then correlating the evaluative and regulatory scales with several personality and emotion-process scales in Study 2. The idea underlying this investigation is that reflection on ongoing emotional experience will affect a person's self-perception and thus his or her reports of the meta-experience. At the same time, personality factors will influence how one evaluates and attempts to regulate emotional experience.

The Emergence of Dimensions of Mood Experience

The interaction of distinct emotional experiences with themselves and with other aspects of personality constitutes a dynamic system (Mayer, 1993). Measurement of this system relies on the accurate assessment of each of these component parts. To improve such assessments, the present paper begins with the idea that meta-experience involves the conscious evaluation and regulation of mood (Mayer & Gaschke, 1988) and then continues by developing scales to measure such meta-experience. In addition, the way in which one regulates and evaluates one's moods may be related to a number of personality factors. For example, empathy reflects an ability to identify with the emotional experience of another person. But one's empathy for another may depend on how one experiences one's own mood. Furthermore, the type of regulation one employs may depend upon the mood being experienced. We first identify important domains of meta-experience so as to understand the relation of such factors to related personality scales.

The Relation of the Present Work to Already-Existing Scales

The description of conscious mood regulation must be fairly comprehensive to be convincing. Several personality scales already catalog a number of meta-experiential dimensions, but none do so comprehensively either alone or in combination with the other scales. Consider the results from six factor analyses of both state and trait scales of meta-experience, shown in Table 1 (Catanzaro & Mearns, 1990; Mayer, Marnberg, & Volanth, 1988, Studies 1 and 2; Mayer & Gaschke, 1988; Salovey, Mayer, Goldman, Turvey, & Palfai, 1992, 1994; Swinkels & Giuliano, in press; Taylor, Ryan, & Bagby, 1985). Table 1 divides meta-experiences into those that evaluate and those that regulate mood. Evaluative experiences reported in the literature typically include whether the mood is attended to, clear, acceptable, influential, and typical, whereas regulatory experiences include attempts to repair bad moods or maintain good ones. Dimensions related to meta-experience such as those measuring mood or mood swing/neuroticism are in a separate, bottom section because they refer to emotion itself, or emotion-related traits, rather than the reflection upon it. Further consideration of Table 1 suggests that certain major dimensions may be absent. For example, although the experience of improving a bad mood is present, that for controlling too good a mood does not appear and yet this is a frequent occurrence (Parrott, 1993).

One reason each of the existing meta-experience scales has only a few subscales is the factor-analytic approach they employed. Contemporary factor-analytic practice tends to extract only a limited number of factors

TABLE 1
 ORGANIZATION OF PAST FACTORIAL SOLUTIONS IN THE DOMAIN OF
 META-EXPERIENCE OF MOOD

General category	Correspondent meta-experience dimension [Study; Factor number]
Evaluation	Attention to moods [E1] Externally oriented feelings (e.g., doesn't pay attention internally) [G4] Mood-monitoring [F1] Clarity versus confusion [B1] Introspective clarity [C1] Confusion-clarity [D2] Clarity of moods [E2] Mood labeling [F2] Distinguish body from feelings [G1] Ability to describe feelings [G2] Mood influence versus no influence [B3] Changed outlook on life [B4] No influence of mood on outlook [C3] No influence of mood on thinking [C5] Out of control-under control [D1] Acceptance-rejection [D3] Typical-atypical [D4]
Regulation	Negative mood repair [A1] Mood repair [E3] Change-stability [D5] Mood maintenance [B5]
Nonreflective dimensions	Good mood versus bad mood [B2] Bad mood versus good mood [C2] Good/manic mood [C4] Daydreaming [G3]

Note. Letters refer to the following studies: A. Catanzaro & Mearns (1990); B. Mayer, Mamberg, & Volanth (1988, Study 1); C. Mayer, Mamberg, & Volanth (1988, Study 2); D. Mayer & Gaschke (1988); E. Salovey, Mayer, Goldman, Turvey, & Palfai (1994); F. Swinkels & Giuliano (in press); G. Taylor, Ryan, & Bagby (1985). Numbers refer to the number of the factor or scale from the given study.

so as to avoid mathematically inadequate or conceptually murky solutions. Recently we have introduced a "multidomain approach" to factor analysis which permits higher numbers of extracted dimensions while maintaining theoretical clarity; in exchange, orthogonality of factors across domains is sacrificed. This approach partitions tests according to conceptual criteria, factor analyzes the test within each partition, and then employs the obtained factors together (Mayer *et al.*, 1991). For example, consider a school achievement test that contains vocabulary, arithmetic, reading, and spelling sections among others. Psychometrically, each of these sections

(vocabulary, etc.) comes from a distinct, rationally defined content area or domain (Nunnally, 1978, pp. 193, 258). Factor analyzing vocabulary, spelling, and other content areas together would likely yield factors dominated by items from one or two domains (e.g., vocabulary and arithmetic) which crowd out factors representing weaker content domains (e.g., reading, spelling). Moreover, later factors may join items with superficial similarities in content such as, for example, arithmetic items and a numerically oriented reading comprehension item (e.g., on economics). To avoid this problem in achievement and ability tests, one first analyzes such subscales separately and only subsequently factor analyzes across those and other subtest scores in order to employ them all (without losing the distinctions between them) so as to estimate, for example, overall school achievement (Anastasi, 1988).

Analogously, the multiple-domain approach states that we will want to be sensitive to different domains in our personality tests. The decision to divide a test should be based on theoretical rationale and conceptual validity. Spelling and arithmetic reflect different types of knowledge and are taught separately; this provides the justification to keep them distinct during a factor analysis. Similarly, for meta-experience, we may distinguish between its evaluative and regulatory domains as was done in Table 1, and divide the test accordingly. Study 1 does just that: It divides meta-experience into separate evaluative and regulatory domains and factor analyzes *within* each domain separately. In Study 2, the dimensions of meta-experience obtained from Study 1 were correlated with various criterion scales, and styles of emotional experience were discussed.

STUDY 1

Study 1 examined a meta-experience scale divided into evaluative and regulatory items and then factor analyzed within each domain separately. We hypothesized that by so doing we would obtain a more complete and coherent description of meta-experience than has been obtained in the past. In Study 2 we will examine styles of meta-mood experience.

Overview

Study 1 took place in two phases. In Phase 1, a set of items was administered to a first sample, and evaluative and regulatory item domains were separately examined by factor analysis. Phase 2 readministered the item set, edited for brevity and coherence, to a new sample. At the end of Phase 2 still briefer scales of evaluative and regulatory meta-experience were constructed for subsequent studies.

Subjects

Phase 1 employed 697 students from several two- and four-year colleges in the greater New York and Cleveland areas. Phase 2 employed 767 University of New Hampshire undergraduates.

Collection of Items

The Phase 1 item set consisted of separate evaluative and regulatory mood domains each divided into subdomains. Because research indicates that on-line mental experience may be more accurately reported than retrospective reports (Ericsson & Simon, 1980) the scales developed here inquire as to the individual's current experience of mood.

Meta-evaluative domain. Evaluative experience items were divided into eight clusters: (a) Clarity–Confusion, e.g., “I am very clear about my present emotion” (8 items); (b) Influence–No Influence, e.g., “My mood is so strong that my thinking isn't as sensible as I would like it to be” (8 items); (c) Generality–Specificity, e.g., “My mood is in agreement with the way the world is around me” (8 items); (d) Acceptance–Rejection, e.g., “There is nothing wrong with feeling the way I do” (6 items); (e) Typicality–Atypicality, e.g., “I feel this way a lot” (4 items); (f) Causality–Randomness, e.g., “My present mood is in response to a very real situation” (4 items); (g) Strength–Weakness, e.g., “My mood is overpowering” (4 items); and (h) Longevity–Brevity, e.g., “It seems as if this mood will go on forever” (4 items). Items concerning attention to mood were not included as the entire scale draws the test-taker's attention to mood. The various classes of included items were expected to reduce to a smaller number of factors.

Meta-regulation domain. Regulatory experience items were: (a) No repair of bad mood, e.g., “I am enduring my bad feelings until they pass” (5 items); (b) Repair of bad mood, e.g., “I am thinking good thoughts or fantasizing in order to cheer myself up” (5 items); (c) Good mood maintenance, e.g., “I'm not trying to change my happy mood” (5 items); and (d) Good mood dampening, e.g., “I must put a check on this good mood before I lose control” (5 items). The 4-point response scale for all these items was anchored at “Definitely do not feel” (“1”) and “Definitely Feel” (“4”).¹

As noted above, the complete item set was employed for Study 1. Items were reduced in number for Phase 2, and, on the basis of Phase 2 results, the final scale was prepared.

Phase 1: Procedure and Results

The entire 66-item set was administered to Sample 1, some of whom took the scales as part of other studies. A multidomain factor-analytic approach is described first; afterward, a regular factor analysis is described for purposes of comparison. Employing a multidomain approach, we first factor analyzed the evaluative items. A principal axis factor analysis with a varimax rotation and a joint scree/meaningfulness criterion led us to select a 4-Factor solution for the evaluative items: (a) Mood Clarity–Confusion (e.g., “I can accurately describe my present mood”), (b) Mood Acceptance–Rejection (e.g., “There's nothing wrong with this mood”), (c) Typical–Atypical mood (e.g., “It is a typical mood for me.”), and (d) Mood's Influence on Thinking, (e.g., “Mood hasn't changed my thinking”).

¹ In Phase 1 of Study 1 only, the bad-mood items were each followed by parenthetical instructions directing participants who were not in bad moods to mark “1” on the item; the good-mood items similarly directed participants not in good moods to mark “1” on their items. Participants complained about this response format, and so for Phase 2 the same items were employed, but with the parenthetical instructions deleted. The Phase 2 analyses of Study 1 ($N = 767$) were therefore performed on the same items, but with the atypical response format deleted before we began.

For regulation, the same factorial approach yielded a three-factor solution: (a) Pleasant–Unpleasant mood (“I’m not doing anything to change this happy mood”), (b) Mood dampening (e.g., “I’m trying to put a damper on this happy mood before I make a fool of myself”), and (c) Mood improvement, (e.g., “I’m thinking good thoughts to moderate this bad mood”).

The utility of the multidomain approach in this area was indicated by the clarity of the solutions within each domain. By way of comparison, we factor analyzed the item set as a whole: that is, we combined evaluative and regulatory subdomains but otherwise used the same procedures as before. We obtained a solution similar to those found in the past (see Table 1), in that an incomplete set of factors emerged (Pleasant–Unpleasant Mood, Clarity, Dampening, Typicality, and Influence). We therefore further pursued and developed the multiple-domain solution in Phase 2.

Phase 2: Procedure and Results

Phase 1 produced a set of four evaluative and three regulatory factors that clearly described both domains. Preparatory to Phase 2, we removed redundant items, rewrote others for clarity, and deleted a small set of regulatory items that had loaded on the first pleasant–unpleasant mood factor in the regulatory domain so as to attempt to remove that factor. This was done because the first factor seemed to measure mood rather than the reflective experience of mood.² The revised scale (55 items) was then administered to a new sample and factor analyzed.

Factor analyses. The factor structure for meta-evaluation remained exactly as it had for Phase 1. A principal axis factor analysis yielded eigenvalues of 5.45, 4.34, 2.86, 2.11, 1.50, and 1.37, which supported a four-factor extraction. When rotated, this solution yielded Clarity–Confusion, Acceptance–Rejection, Typicality–Atypicality, and Influence–No Influence factors, exactly as before. The full factor solution is shown in Table 2.

A principal axis factor analysis of the revised regulatory scale, employing the joint scree/meaningfulness criterion yielded three factors (first five eigenvalues of 5.77, 4.12, 1.94, 1.06, and .97) of Mood Repair (“I’m thinking good thoughts to cheer myself up”), Mood Maintenance (“I’m not trying to change this mood”) and Mood Dampening (“I’m trying to relax because this mood is too positive”); this solution can be seen in Table 3. The revision therefore successfully substituted a reflective di-

² As noted in Table 1, many meta-mood scales inadvertently include scales of pleasant-mood or neuroticism–stability. Given the large number of excellent scales already available to measure such constructs, we deleted such scale items from our scale.

TABLE 2
FOUR-FACTOR, PRINCIPAL AXIS FACTOR ANALYSIS OF THE META-EVALUATION DOMAIN FOR
STUDY 1, PHASE 2 (LOADINGS BELOW +/- .20 ARE NOT REPORTED)

Item	Factor: I	II	III	IV
My thinking hasn't changed.	-.74	—	—	—
It has altered my outlook.	.71	—	—	—
It's changed my beliefs and opinions.	.67	—	—	—
My beliefs and opinions are unchanged by this mood.	-.66	—	—	—
It's changed how I think.	.63	—	—	—
It is coloring everything I look at.	.45	—	—	—
It hasn't altered my outlook.	-.43	—	—	—
It has no influence on how I view the world.	-.40	—	—	—
I shouldn't feel this way.	—	.74	—	—
I know this feeling is wrong.	—	.68	—	—
I'm ashamed of it.	—	.68	—	—
There's nothing wrong with it.	—	-.65	—	—
I'm scared by it.	.34	.52	—	—
I'm not ashamed of my mood.	—	-.43	—	—
There's no need to change it.	—	-.39	—	—
It's a normal way to feel.	—	-.35	—	—
I know exactly how I'm feeling.	—	—	.77	—
It's hard to tell what it is.	—	—	-.67	—
It's hard to describe.	—	—	-.65	—
I know why I feel this mood.	—	—	.65	—
It's clear.	—	—	.58	.20
I don't know why I feel it.	—	—	-.56	—
I can describe my mood.	—	—	.55	—
My mood is confusing.	—	.38	-.42	—
I feel this mood often.	—	—	—	.69
It's very typical for me.	—	—	—	.67
This mood too shall pass.	—	—	—	-.57
This mood will never change.	.22	—	—	.53
This mood will change soon.	-.27	—	—	-.53
It's as if it will last forever.	.31	.32	—	.51
I almost never feel like this.	—	.25	—	.44

mension (mood maintenance) for a simple mood dimension (pleasant-unpleasant mood).

Scale Construction

We next constructed shorter factor-based meta-experience scales for use in subsequent studies. The factor-based evaluative scales were constructed from the three highest positively and negatively loading items from the four bipolar meta-evaluation scales, resulting in four 6-item subscales (24 items). The factor-based regulatory scales were constructed

TABLE 3

THREE-FACTOR PRINCIPLE AXIS FACTOR ANALYSIS OF THE META-REGULATION DOMAIN FOR STUDY 1, PHASE 2 (LOADINGS BELOW +/- .20 NOT REPORTED)

Item	Factor:	I	II	III
I'm imagining something better to improve my mood.		.72	—	—
I'm reminding myself of the nice things in life to improve the mood.		.71	—	—
I'm thinking good thoughts to cheer myself up.		.68	—	—
I'm thinking of good things to come, so as to make this mood better.		.64	—	—
I'm doing nothing to improve or change this mood.		-.63	.25	—
I'm planning positive things to keep my mood going.		.61	—	—
I'm counting my pluses to improve my mood.		.60	—	—
I'm not doing anything that will change this mood.		-.59	.27	—
I'm trying to see the whole picture, to change the mood by putting it in perspective.		.57	—	—
I'm reminding myself of reality to make this mood better.		.52	—	—
I wouldn't want to change this mood.		-.29	.70	—
I'm not trying to change it because I believe it is important to experience.		—	.69	—
I'm letting my mood continue because that will keep it steady and positive.		—	.66	—
I am focusing on parts of my mood to make it stronger.		.25	.63	—
I'm not trying to change this mood.		-.47	.62	—
I'm purposefully continuing the thoughts that brought this mood on, to keep it going.		—	.60	.34
I'm not trying to change it because I believe it is important to experience.		—	.53	—
I'm allowing myself to experience the mood.		—	-.23	.51
I distrust how positive this mood is, and am trying to bring it down.		—	—	.75
It's so high that I need to dampen it before I make a fool of myself.		—	—	.74
I am trying to relax because the mood is too positive.		—	.24	.63
I'm reminding myself of reality to bring it down a little.		—	—	.58
It's so high that I'm trying to bring myself down to better concentrate.		—	—	.46

from the five highest loading items on each of the unipolar meta-regulatory factors, for a total of three 5-item scales (15 items total). The scales and their items are listed in the Appendix. The reliabilities and intercorrelations of the four meta-evaluation and three meta-regulation scales appear in Table 4. Their coefficient alpha reliabilities were very good ($r(762) = .75$ to $.87$), and their low intercorrelations indicated that the subscales

TABLE 4
RELIABILITIES AND INTERCORRELATIONS OF THE META-EXPERIENCE SCALES: STUDY 1 PHASE 2

Variables	Meta-experience scales						
	Evaluation				Regulation		
	Cl	Ac	Ty	In	Re	Da	Ma
Evaluation							
(1) Clarity	.79	.21**	.07	-.01	-.09*	-.04	.19**
(2) Acceptance		.75	.17**	-.25**	-.23**	-.06	.56**
(3) Typicality			.79	.10**	-.19**	-.06	.36
(4) Influence				.80	.13**	-.05	-.05
Regulation							
(1) Repairing					.87	-.03	-.36
(2) Dampening						.79	-.24
(3) Maintenance							.78
Mean	26.5	29.8	23.2	24.5	33.4	22.3	20.1
SD	7.2	6.6	5.9	7.2	8.5	7.3	3.6

Note. $N = 759-762$.

* $p < .05$.

** $p < .01$, two-tailed tests.

were independent of one another. The results of Study 1 produced a more complete set of meta-experience scales than previous attempts, all with good psychometric properties. In order to further assess the scales, a second study was conducted so as to apply a confirmatory factor analysis to them. More important, Study 2 correlates the scales with a variety of criterion measures so as to better understand what they measure.

STUDY 2

Experiential scales of evaluation and regulation were expected to show consistent relationships to a variety of personality processes and traits. In Study 2, evaluative dimensions were correlated with criterion scales such as those measuring self-consciousness and empathy, which rely on reference to one's own feelings. Regulatory dimensions were correlated with criterion scales measuring causal attribution and coping mechanisms, which assess one's perception of being able to act effectively upon one's mood. The plan was to cross-validate analyses from Study 1, and then examine how the evaluative and regulatory meta-experience scales relate to one another, and to the various criterion scales. From such data, a better understanding of the experiential styles of meta-mood can be developed.

Methods

Subjects

Two hundred and twenty-six undergraduates from the University of New Hampshire participated in groups of 15 to 30 to fulfill course requirements.

Meta-experience and Criterion Scales

The four meta-evaluation scales (Clarity, Acceptance, Typicality, and Influence) and the three meta-regulation scales (Repair, Maintenance, and Dampening), developed in Study 1 were used here. The order of the items (see Appendix) was scrambled within the evaluative and regulatory domains.

An additional seven criterion scales were also administered. The *Brief Mood Introspection Scale* (Mayer & Gaschke, 1988; 16-items) measures mood along the (a) pleasant–unpleasant and (b) arousal–calm dimensions of mood. The *Ways of Coping Scale* (Folkman & Lazarous, 1985; revised 64 items) measures eight styles of emotional coping, including (a) focusing on the problem, (b) wishful thinking, (c) distancing, (d) emphasizing the positive, (e) self-blame, (f) distracting oneself through destructive means such as drugs so as to obtain tension reduction, (g) self-isolation, and (h) seeking social support. The *General Causality Orientations Scale* (Deci & Ryan, 1985; 36 items) yields three subscales of causality orientation. The (a) autonomy subscale describes a belief that one chooses and that directs one's actions; the (b) control subscale reflects feeling that one's actions are determined by others; and the (c) impersonal subscale reflects a perception of being unable to influence or predict outcomes in one's life. The *Self-Report Borderline Scale–Revised* (Conte, Plutchik, Karasu, & Jarrett, 1980; 37 items, excluding items with extreme pathological content) measures ego alienation and yields one score indicating borderline emotion, susceptibility to transient psychotic states, and self-destructive processes. The *Emotional Empathy Index* (Davis, 1983; 28 items) measures four dimensions of empathy, including (a) taking another person's perspective, (b) concern for others, (c) distress caused by other's circumstances, and (d) frequency of daydreaming. The *Life Orientation Test* (Scheier & Carver, 1985; 12 items) is a measure of optimism–pessimism. And the *Alexithymia Scale* (Taylor *et al.*, 1985; 24 items) measures four aspects of alexithymia, a psychiatric diagnosis involving the ability to label one's emotions. It measures the abilities (a) to distinguish emotional experience from bodily sensations, (b) to describe emotional experience, (c) to daydream, and (d) to value emotional experience.

Procedure

Participants, tested in groups, received a booklet containing all the above scales in the order presented above, and were asked to complete them. Testing took approximately 50 minutes.

Results

General Scale Characteristics and Confirmatory Factor Analysis

We began the analyses by reexamining the properties of the meta-experience scales developed in Study 1. As before, the coefficient alpha reliabilities of the meta-experience scales ranged between .75 and .87. The correlations among the four meta-evaluation scales mostly fell between $\pm .30$, with only one rising as high as $r = .47$. The three meta-regulation scales' intercorrelations ranged from $-.10$ to $-.32$ (Table 5).

In addition to the above we verified the adequacy of the four-factor evaluative and three-factor regulatory solutions by performing confirmatory factor analyses using LISREL 7 (Joreskog & Sorbom, 1989) within each domain. The first of the two confirmatory factor analyses was per-

TABLE 5
RELIABILITIES AND INTERCORRELATIONS OF THE META-EXPERIENCE SCALES: STUDY 2

Variables	Meta-experience scales						
	Evaluation				Regulation		
	Cl	Ac	Ty	In	Re	Da	Ma
Evaluation							
(1) Clarity	.81	.47**	.17**	-.25**	-.02	.10	.22**
(2) Acceptance		.78	.38**	-.27**	-.23**	-.06	.54**
(3) Typicality			.76	.05	-.18**	-.12	.49**
(4) Influence				.80	.07	-.19**	-.02
Regulation							
(1) Repairing					.82	-.10	-.32**
(2) Dampening						.77	-.21**
(3) Maintenance							.80
Mean	21.0	23.9	17.8	16.2	16.8	15.6	21.4
SD	5.1	4.9	4.9	5.3	5.3	5.0	3.4

Note. $N = 225$.

* $p < .05$.

** $p < .01$, two-tailed tests.

formed on the 15 items from the three regulatory scales (5 items each). The second analysis was on 12 item-pairs (of 24 items) formed from the four evaluative scales (6 items each). Pairs of regular and reverse-scored evaluative items were employed rather than individual items, so as to correct for artifactual positive item intercorrelations caused by response bias (see Green, 1988; examples in Citrin, Green, & Sears, 1990; Salovey *et al.*, 1992, 1993). Each item-pair was formed by combining an item with its most similarly worded reverse-scored item on the same factor scale (see Appendix).

We tested evaluative and regulatory domains against a standard oblique factor model. The model we used in each case specified that items could load only on their hypothesized factor, that factors had unit variance and could intercorrelate, and that error variances were unique and uncorrelated (this followed Joreskog & Sorbom, 1989, p. 99). Given sufficient sample size, any real-world data set should diverge from such a rigid hypothetical model because it will be at least "minimally false" (Bentler & Bonett, 1980), and the present data were no exception: both the four-factor evaluative and three-factor regulatory models were statistically significantly different from the model (Evaluative $\chi^2 = 106.9$, $p < .001$;

Regulatory $\chi^2 = 135.1, p < .001$). A far better indication of the model's fit was that the hypothesized factor structures explained 92% of the variance for the evaluative scales, and 92% for the regulatory scales, according to the goodness-of-fit statistic. These values were 87 and 89% of the variance, respectively, once corrected for the number of estimated parameters. Another indication of the overall good fit of the factor models was that each individual item (or item-pair) loaded significantly on its predicted factor, without exception (Evaluative item t 's = 6.8 to 19.3, $p < .001$; Regulatory item t 's = 6.0 to 14.5, $p < .001$). This is a good fit for a model of this complexity, and could be improved only by atheoretical and arbitrary-seeming relaxation of parameters (see Joreskog & Sorbom, 1989; Loehlin, 1987, pp. 81–84). We therefore employed the four evaluative and three regulatory scales confirmed here in the following analyses so as to study the relation of the meta-experience of mood to the criterion measures.

Relation among Meta-experience and Criterion Scales

Table 6 shows over 300 relationships among the meta-experience and criterion scales, both in simple correlational form (top of double rows), and the correlation with pleasant–unpleasant mood partialled out (bottom of double rows). Partial correlations are shown, in addition to zero-order correlations, because mood and meta-experience overlap somewhat. This Results section will focus on relationships involving partial correlations (with pleasant–unpleasant mood controlled) significant at the $p < .05$ level or beyond, although Table 6 includes both types of correlations. Generally, as Table 6 indicates, partialling out pleasant–unpleasant mood had little effect on the correlations between meta-experience and the criteria.

Evaluative scales. The first evaluative scales to be considered are the Clarity and Acceptance scales. Their relatedness is reflected in their frequent correlations with the same criterion scales. In Study 2, Clarity and Acceptance correlated with the Alexithymia subscales measuring the ability to identify present emotional experience ($r(221) = .50, .30$, respectively), and to describe those emotional experiences ($r(221) = .32, .23$). Both Clarity and Acceptance of mood were also moderately associated with fewer borderline characteristics and negatively with wishful thinking and self-blame. Note that although both scales are correlated with pleasant mood, the above reported relationships (all $p < .05$) have all had pleasant–unpleasant mood partialled out.

The major difference between Clarity and Acceptance seems to rest with their relation to the regulatory dimensions. Clarity is largely independent of any regulatory scales (its highest correlation is $r(221) = .22$, with Maintenance). Acceptance, in contrast, is moderately related to low-

TABLE 6
CORRELATION AND PARTIAL CORRELATION MATRIX OF THE META-EXPERIENCE SCALES AND THE CRITERION MEASURES; STUDY 2

Criterion scales	Meta-experience scales											
	Evaluation					Regulation						
	Mood	Clr	Acc	Typ	Inf	Rep	Dam	Mai				
Pleasant-unpleasant mood	<i>r</i>	.26**	.61**	.49**	-.15*	-.13	-.05	.59**				
	<i>r(p)</i>	—	—	—	—	—	—	—				
Alexithymia	<i>r</i>	.45**	.32**	.05	-.19**	-.19	.26**	.07				
Emotional identification	<i>r(p)</i>	.50**	.30**	.03	-.25**	-.21*	.18*	.04				
Describe emotion	<i>r</i>	.39**	.32**	.08	-.17*	-.17	.06	.22**				
	<i>r(p)</i>	.32**	.23**	.06	-.25**	-.13	.00	.08				
Daydreaming	<i>r</i>	-.06	-.08	-.00	-.12	.05	-.01	-.02				
	<i>r(p)</i>	.19*	.10	-.18*	-.17	.03	.00	-.12				
Emotional value	<i>r</i>	.10	.13	.07	-.06	.05	.04	.06				
	<i>r(p)</i>	-.02	-.02	.06	.15*	.04	-.01	-.01				
Empathy	<i>r</i>	.08	.10	.05	-.12	.22**	.05	.06				
Perspective taking	<i>r(p)</i>	-.06	-.07	.07	-.05	.15	.05	.02				
Daydreaming	<i>r</i>	-.05	-.01	.02	.19**	.09	-.01	.00				
	<i>r(p)</i>	-.10*	.00	.02	.22**	-.05	.02	.16				
Empathic concern	<i>r</i>	.16*	.17**	.14	-.17*	.17*	.12	.07				
	<i>r(p)</i>	.03	-.03	.16*	-.14	.15	.13	.06				
Personal distress	<i>r</i>	-.31**	-.21**	.03	.18**	.25**	-.13	-.14*				
	<i>r(p)</i>	.22*	-.10	.13	.21*	.23**	.02	.04				
Optimism (LOT)	<i>r</i>	.07	.25**	.02	-.06	-.10	-.05	.20**				
	<i>r(p)</i>	-.06	.05	-.12	-.08	-.09	-.05	.10				
Borderline	<i>r</i>	-.34**	-.43**	-.06	.22**	.16*	-.15	-.21*				
	<i>r(p)</i>	-.25**	-.36**	.06	.20*	.16*	-.18*	-.04				

ered likelihoods of Repair and highly related to heightened attempts to Maintain mood. Thus, people high in Clarity and Acceptance both are familiar with and recognize their moods; those high in Acceptance are more apt to maintain rather than change their present mood.

In contrast to the Clarity–Acceptance pair of dimensions, the mood Typicality subscale appeared to be relatively independent of the criterion measures, although the scale does relate to other mood and meta-mood dimensions. Table 6 indicates that one is more likely to consider pleasant moods as Typical as well as to accept Typical moods and to attempt Maintenance of such moods rather than change them.

The mood Influence subscale correlated with poorer mood recognition ($r(121) = -.25$) and positively with daydreaming ($r(121) = .22$), and was similarly related to Borderline-related pathology, and a feeling that matters are outside of one's own control. This suggests that when a mood is too influential, it is perceived as out of one's control, and may also produce fantasy-prone thought.

Regulatory scales. There are two regulatory scales, Repair and Dampening, that can also be compared and contrasted to one another; although uncorrelated with each other, both scales correlated in opposite directions with a variety of criteria. For example, on the Folkman and Lazarus (1985) coping measures, Repair typically correlated in the direction of positive thinking; Dampening with negative thinking (e.g., Wishful thinking: $r(221) = .18, -.17$, respectively).³ This pattern repeated itself for the Positive emphasis and Tension reduction scales. Although Repairers were trying to think positively, people who reported more Repair also reported more Borderline symptomatology, more Empathic Distress, and a poorer ability at Emotional Identification. In all, a picture emerges of both Repairers and Dampeners as actively changing their moods in the appropriate direction. Both scales have remarkably low correlations with self-report of pleasant–unpleasant mood ($r = -.13, -.05$)!

The third regulatory dimension, Maintenance, had fairly strong correlations with the meta-evaluation variables of Acceptance and Typicality, but showed no strong relation to any of the criterion scales. Study 2's discussion of these styles is integrated into the General Discussion for purposes of brevity.

³ The correlations here were significant but indicated a substantial independence between these meta-experience scales and Folkman and Lazarus' (1985) scales. The reliability of the present scales centered around $r = .80$; those for the Folkman and Lazarus' scales centered around $r = .72$. For these reasons, the low correlations indicate the scales are measuring two different constructs, rather than possessing low intercorrelations due to low reliabilities.

GENERAL DISCUSSION

A Comprehensive Description of Meta-experience States

The scales developed in Study 1 represented a considerable advance over prior scales. By first dividing experience into evaluative and regulatory domains, and then factor analyzing them separately, we obtained the first truly comprehensive representation of the meta-experience domain. Four evaluative dimensions were obtained of Clarity, Acceptance, Typicality, and Influence, as were three regulatory dimensions of Mood Repair, Dampening, and Maintenance. These dimensions, especially the regulatory triad, are collectively more comprehensive than those found in prior studies. Study 2 confirmed the factor structure of the two sets of scales obtained in Study 1. It further illustrated that the four evaluative and three regulatory scales have theoretically significant interrelations with related concepts.

It is worth noting that the multidomain factor analysis was the only way to obtain such a comprehensive group of scales. Analyses examining both domains together yielded more limited factor solutions similar to those of prior published scales.

Relation to prior scales of meta-experience. The present scales' four evaluative scales of Clarity, Acceptance, Influence, and Typicality are similar to the four evaluative scales in Mayer & Gaschke (1988; Out-of-Control/ Clarity/ Acceptance/ Typicality); The only change was that Influence replaces the former, Out-of-Control factor, which was theoretically less specific. The three regulatory scales of Repair, Maintenance, and Dampening, fare far better theoretically (and empirically) than did the earlier published version of the scale which contained only one weak, regulatory scale (named, Change). Collectively, these seven scales are also more comprehensive than others in our review of related scales. Moreover, the present scales have the advantage of being very short, with only five or six items per scale, while retaining excellent reliability, factorial validity, and predictive validity in relation to a number of other scales.

It should be noted that the present meta-experience scales are worded to measure experiential *states* rather than traits, and therefore have a somewhat different emphasis than certain of the comparison scales. For example, a scale of Typicality (e.g., How typical is your present mood?) makes considerable sense for understanding an individual's style at a given time but is hard to translate into trait terminology.

Approaches to Conscious Mood Regulation

Given that the measurement satisfies the initial requirements of comprehensiveness, it is possible to move on to a further goal of the present

studies—to consider how they relate to various types of conscious mood regulation. One could simply say there are seven basic dimensions of mood experience, each one corresponding to the evaluative scales of Clarity, Typicality, Acceptance, and Influence, and to the regulatory dimensions of mood Repair, Dampening, and Maintenance. But current conceptions of personality and mood typically treat mood regulation at a more general, stylistic level, and some integration from this general level to the present scales would be of use. To accomplish this aim, we will take three personality types related to mood regulation and suggest how the dimensions measured by the present scales may be related to such types. This admittedly speculative enterprise will prepare the way for further research with these scales. We will review three types of personalities commonly discussed in the literature and attempt to relate them to the present scales: (a) the mood-influenced person, (b) the mood-regulating person, and (c) the emotionally open/intelligent person.

The mood-influenced individual. A great deal of research effort has been expended in describing how a person's thoughts may be altered by his or her mood (e.g., Fiske & Taylor, 1991). Personality psychologists involved in this research have also been interested in whether certain individuals were more likely than others to have their moods influence their thinking. One motivation for the original meta-experience scale was to identify whether people knew when mood was influencing their judgment (Mayer *et al.*, 1988). The mood Influence scale has content most directly associated with whether mood influences thought. To date, however, such self-reports of Influence have been unrelated to the degree mood influences judgment (Mayer *et al.*, 1988; Mayer, Gaschke, Braverman, & Evans, 1992). Alternatively, such experiences may be related to other mood-cognition effects, such as the disruptive effects of anxiety on cognition, or the experiences may be related to a personality trait that merges thought and feeling such as "absorbed" experience (e.g., Tellegen & Atkinson, 1974).

The self-regulating individual. A number of personality psychologists have become interested in those people who attempt to control themselves in general (e.g., Wegner & Pennebaker, 1993) and to control their moods in particular (Salovey, Hsee, & Mayer, 1993). The scales most related to such self-control are the regulatory ones termed Repair and Dampening. Because Repairers and Dampeners both often employ the same coping mechanisms—albeit in the opposite direction from one another—it may be possible to speak of one more global style of Intervening in mood. It may even be possible that the same people alternate between Repair and Dampening. For example, these "interventionists" might repair their bad moods at some times and dampen their good moods at other times. Repair

and Dampening would fail to intercorrelate in cross-sectional studies because the same individual would not employ both Repair and Dampening simultaneously (because they would apply to different moods). These people would share in common that they exert control over themselves; that is, they show evidence of autonomously influencing their feeling.

The emotionally open or intelligent individual. Finally, contemporary research describes individuals who are especially adept at understanding and dealing with their feelings (Averill & Thomas-Knowles, 1991; Salovey & Mayer, 1990). Such individuals are supposed to be particularly healthy. For example, healthy personalities are said to be composed of elements that work together, communicating freely and cooperating to produce good outcomes in a democratic personality style (e.g., Maslow, 1968). The content of the *Clarity* dimension of meta-experience seems indicative of such a style. Individuals experiencing clarity of mood report themselves to be autonomous, with good ego boundaries, good psychological health, and a positive outlook. The degree to which individuals experience clarity of mood independent of the valence of a mood may be the basis of a healthy personality style. Salovey *et al.* (1994) found that Clarity predicted reduced rumination following negative mood inductions. Mayer *et al.* (1992) showed that mood-clarity types showed more positive-cognitive judgments; in both cases positive mood was partialled out. It is possible, however, that this dimension gains its predictive qualities from its likely correlation with optimism and confidence rather than any increased insight into mood. This would explain the failure of the (clarity-related) Alexithymia scale to predict better recognition of mood in abstract stimuli (Mayer, DiPaolo, & Salovey, 1990). The precise meaning of Mood-Clarity, therefore, has not yet been entirely ascertained. Other dimensions might indicate openness as well. One alternative candidate-configuration might be Acceptance coupled with Mood-Repair or Dampening, because the ability to blend self-acceptance with a continued desire to improve seems a hallmark of many psychologically healthy constructs such as self-actualization and flow (Csikszentmihalyi, 1990; Maslow, 1968).

Concluding Remarks

Contemporary psychological literature depicts several different approaches or styles to mood regulation. Researchers may be better able to identify such approaches, as well as to identify new ones, using the seven basic-level dimensions of mood experience measured by the scales developed here. Such scales lay the groundwork for determining how personality contributes and responds to the ebb and flow of mood.

APPENDIX: META-EVALUATION AND META-REGULATION SCALES

Meta-evaluation Scale

Instructions: Please review your current mood and describe your thoughts and feelings about your present mood and its influence on you right now.

1	2	3	4	5
Definitely <i>does not</i> describe my mood.	Somewhat <i>does not</i> describe my mood.	Neither describes nor does not describe my mood.	Somewhat describes my mood.	Definitely describes my mood.
<i>Reverse-scored items</i>				
<i>Clarity</i>				
I know exactly how I'm feeling.			It's hard to tell what it is.	
I know why I feel this mood.			I don't know why I feel it.	
It's clear.			It's hard to describe.	
<i>Acceptability</i>				
There's no need to change it.			I shouldn't feel this way.	
There's nothing wrong with it.			I know this feeling is wrong.	
I'm not ashamed of my mood.			I'm ashamed of it.	
<i>Typicality</i>				
I feel this mood often.			I almost never feel like this.	
It's very typical for me.			This mood, too, shall pass.	
This mood will never change.			This mood will change soon.	
<i>Influence</i>				
It has altered my outlook.			It hasn't altered my outlook.	
It's changed how I think.			My thinking hasn't changed.	
It's changed my beliefs and opinions.			My beliefs and opinions are unchanged by this mood.	

Meta-regulation Scale

Instructions: Sometimes people try to change their moods, and other times they let the moods be. Please describe your present approach to your mood. Please try to answer all the questions using the following scale:

1	2	3	4	5
Definitely <i>does not</i> describe my approach.	Somewhat <i>does not</i> describe my approach.	Neither describes nor does not describe it.	Somewhat describes my approach.	Definitely describes my approach.
<i>Repair</i>				
	I'm imagining something better to improve my mood.			
	I'm reminding myself of the nice things in life to improve the mood.			
	I'm thinking good thoughts to cheer myself up.			
	I'm thinking of good things to come, so as to make this mood better.			
	I'm planning positive things to keep my mood going.			

- Maintenance* I wouldn't want to change this mood.
I'm not trying to change it because I believe it is important to experience.
I'm letting my mood continue because that will keep it steady and positive.
I'm not trying to change this mood.
I'm allowing myself to experience the mood.
- Dampening* I distrust how positive this mood is, and am trying to bring it down.
It's so high that I need to dampen it before I make a fool of myself.
I am trying to relax because the mood is too positive.
I'm reminding myself of reality to bring it down a little.
It's so high that I'm trying to bring myself down to better concentrate.

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