Mood-Congruent Judgment Over Time

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The mood-congruent judgment effect refers to the fact that when a mood and an idea are similar in pleasantness, the idea will generally seem better in some way. For example, when people are happy, they will judge pleasant concepts as richer in their associations, pleasant attributes as more applicable, and pleasant examples of categories as more typical. This mood-related component of cognition is viewed longitudinally among normal students for the first time here. The authors demonstrate that over time, changes in mood covary with changes in judgment in normal individuals.

A person's mood can be thought of as a summary affective response to the internal and external forces encountered by that individual at a given point in time. In this sense, a mood integrates the respective states of such personality subsystems as feelings, psychological reactions, and cognitive appraisals. For example, a happy mood can be seen as a summary of a pleasant feeling state, as well as of relaxed muscles and a cognitive appraisal that the person is cared for (Izard, 1977; Klinger, 1993; Nieuwenhuyse, Offenberg, & Frijda, 1987). Because these mood states come and go in a partially predictable rhythmic pattern, they can be considered to represent a type of second-order personality consistency (Caspi & Bem, 1990; Larsen & Kasimatis, 1990).

As moods come and go, they influence cognitions. One of the influences of mood on cognition involves the mood-congruent judgment effect (Fiske & Taylor, 1991; Forgas, 1992; Singer & Salovey, 1988). Mood congruence refers to a match between a person's mood and thoughts. The mood-congruent judgment effect refers to the fact that when a mood and an idea are similar in pleasantness, the idea will generally seem better in some way. For example, when people are happy, they will judge pleasant concepts as richer in their associations, pleasant attributes as more applicable, and pleasant examples of categories as more typical. A happy person would think sunny weather was more likely or a beautiful street in Paris was a more typical example of the city. Sad people show symmetrical favoritism for unpleasant concepts, attributes, and outcomes (Fiske & Taylor, 1991; Mayer, Gashke, Braverman, & Evans, 1992).

Mood-congruent judgment can be examined at a general level, in terms of its overall influence on personality and other social phenomena, or at a more molecular level, in terms of its underlying mechanisms and exceptions. The overall pleasant-unpleasantness of judgment reflects a person's overall cognitive-emotional "temperature" and, analogous to measuring room temperature from a well-located thermostat, provides one useful overall summary of a person's judgmental status. Yet exceptions exist to any overall pleasant-unpleasant judgment pattern. Just as average room temperature will vary at windows and air ducts in theoretically meaningful ways, so pleasant-unpleasantness of judgment may vary, for example, as individuals attempt to repair their moods by thinking positive thoughts or engage in other particular processes (Forgas, 1992). The discussions of either the overall degree of mood congruency or its more specific exceptions are both meaningful subjects of ongoing research. The present article will, however, focus solely on overall mood congruency.

Prior research into everyday mood and judgment has employed cross-sectional surveys to illustrate that peo-

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ple's everyday moods correlate with their judgment at a given point in time. Such surveys have left open the possibility, however, that mood-judgment correlations were entirely due to differences between people in stable long-term reports of mood and judgment. The present research pursued mood-congruent judgment's general effects in a longitudinal study. It asked whether as people's moods change across time, their judgments change along with those moods. If such is the case, it would identify mood-congruent judgment as an everyday influence on personality functioning.

BACKGROUND

Mood and cognition interact in a variety of ways involving memory, problem solving, stereotyping, and more (for reviews, see Blaney, 1986; Fiske & Taylor, 1991; Forgas, 1992). The mood-congruent judgment effect is one of many such distinct effects; it is the only such effect with convergent support from clinical, experimental, and natural mood studies. Mood-congruent judgment was first recognized in clinical settings among depressed patients, when it was noted that depressed individuals not only felt sad but also thought negatively (e.g., Abramson, Seligman, & Teasdale, 1978; Alloy & Ahrens, 1987; Beck, 1967). However, because depressed patients were identified in part as those who endorsed items on clinical measurement scales such as "I feel I have nothing to look forward to," the criteria for selecting depressed individuals may have been confounded with the outcome measures of judgment (Coyne & Gotlib, 1983).

In the 1970s, mood-congruent judgment was pursued into the laboratory. Normal individuals were entered into happy or sad moods via mood-induction procedures, and their cognition was assessed to see whether their judgments had become more positive or negative. Once again, the mood-congruent judgment effect was obtained (for reviews, see Blaney, 1986; Fiske & Taylor, 1991). Close analysis of results seemed to rule out experimental demand as an explanation of the effect (Fiske & Taylor, 1991). But a more troubling issue concerned whether the mood inductions might themselves prime judgment independent of mood. According to this priming critique, the emotionally charged statements participants read as part of their mood inductions might directly activate positive or negative thoughts independent of any influence of mood on cognition (Blaney, 1986; Mathews & Bradley, 1983; Perrig & Perrig, 1988; Polivy & Doyle, 1980; Riskind, 1989); this problem remains today.

The third, or natural mood, approach emerged in the 1980s and studied normal people's unmanipulated mood. Natural mood approaches are less susceptible to a priming critique. First, they do away with mood inductions altogether. Natural moods are caused by a variety of influences including cognitive appraisals of situations, subcognitive perceptual responses, and largely noncognitive influences, such as the physiological influences of prior emotions, sleep deprivation, odors, foods, menstrual cycles, illness, and characterological makeup (see Eysenck, 1967; Parkinson & Manstead, 1992). Although cognitive appraisals of everyday situations could prime cognitions independently of mood, any direct priming from such situations would be reduced because of intervening memory interference by the time participants report for the study (Anderson, 1990, pp. 162-170).

In a typical natural mood study, a group of subjects take a scale of pleasant-unpleasant judgment after which they self-report their mood. The mood-congruent judgment effect is gauged by the mood-judgment correlation. Mood-congruent judgment is most reliably obtained when (a) a single pleasant-unpleasant factor of judgment is correlated with a single pleasant-unpleasant factor of mood rather than with any specific mood (Mayer et al., 1992, Study 1; Mayer, Mamberg, & Volanth, 1988, Studies 1 and 2), (b) judgment items are counterbalanced as to valence and direction of response (Mayer et al., 1992), (c) there is a temporal proximity between mood and judgment measures of less than 10 minutes (Mayer et al., 1992, Study 3; Mayer et al., 1988, Study 3), (d) the subject does not attribute the cause of the mood to an irrelevant or arbitrary source (Schwarz & Clore, 1983), and (e) the items are global and vague in content (Mayer et al., 1992; Schwarz, Strack, Kommer, & Wagner, 1987). To date, all natural mood-congruent judgment studies have been cross-sectional in design, which left open the possibility that correlations between mood and judgment were due to some long-term set points in people's self-reports rather than actual mood-judgment covariation. Some clinical studies of depressed patients have found longitudinal evidence for a limited form of mood-congruent judgment (e.g., self-ratings; Dent & Teasdale, 1988); however, the complete (i.e., non-self-relevant, multiple-task) effect has not yet been demonstrated longitudinally in a normal population.

INTRODUCTION AND PURPOSE OF THE PRESENT STUDIES

The sine qua non of mood is that it varies over time (Bower, 1981; Larsen & Kasimatis, 1990; Mayer, 1986). For that reason, a longitudinal study is required to establish whether it is true that mood and overall judgment covary over time among normal (unselected) individuals. Should this covariance be present, it would demonstrate that mood-congruent judgment operates in normal personality. If this were the case, it would serve as a documented instance of how two personality com-

ponents, one affective and one cognitive, that are not otherwise logically related may influence one another in regular, rhythmic patterns, and thereby serve as an example of how personality subsystems interact (cf. Hilgard, 1980). Moreover, it would indicate that knowledge of a person's current mood state could be useful in predicting a variety of self- and other- related judgments.

Longitudinal studies are most effectively mounted when the measures employed are brief so that participants will be willing to complete them more than once. Brief scales of pleasant-unpleasant mood already exist, but none do for pleasant-unpleasant judgment. The preliminary study reported in this article developed a brief scale of pleasant-unpleasant judgment. The main study conducted the critical longitudinal tests.

PRELIMINARY STUDY

Method

PLEASANT-UNPLEASANT JUDGMENT SCALES

The preliminary study developed two forms (A and B) of a pleasant-unpleasant judgment scale that were sufficiently brief and interchangeable as to be useful for longitudinal studies. Each scale was limited to 12 items so as to fit on a single page. Pleasant-unpleasant judgment can be conceptualized as a broad cognitive factor on which many judgment tasks load (Mayer et al., 1992). To ensure an adequate item sample, each 12-item scale was composed of four-item subscales of (a) probability estimations, (b) category examples, and (c) concept-salience ratings.

Probability items. The four-item probability subscale concerned two positive events, (e.g., "What is the probability that a 30-year-old will be involved in a happy, loving romance?") and two negative events (e.g., the likelihood of a nuclear war). Subjects responded by circling one of seven alternatives (0%-10%, 11%-20%, 21%-40%, 41%-60%, 61%-80%, 81%-90%, and 91%-100%). Pleasant items were coded from 1 to 7, negative items were coded from 7 to 1, and all items were summed for a total score. Pleasant-mood participants were expected to receive higher scores.

Category items. The four-item category task asked participants to select, for example, "the most typical type of worker" from among the three choices, for example, "A. Conscientious, B. Lazy, or C. Honest." The three responses were rated earlier by 12 independent judges for their emotional valence on a 7-point scale (1 = *unpleasant*; 7 = *pleasant*). Each of the participant's choices had a prejudged valence that was summed across items to form the total score. Participants in pleasant moods were hypothesized to choose more positive exemplars.

Salience items. The four-item salience subscale requested subjects to rate the thoughts, images, and associations that came to mind in response to a target word, such as *generous* or *destroy*, on a scale from 1 (*very few*) to 7 (*a great deal*); negative items were reverse scored. Participants in pleasant moods were expected to obtain higher scores.

THE MOOD SCALE

Pleasant-unpleasant mood was assessed with the like-named subscale of the Brief Mood Introspection Scale (BMIS), a 16-item factor-valid scale that is keyed to both the mood circumplex (Mayer & Gaschke, 1988) and the socioaffective sphere (Saucier, 1992).

PROCEDURE AND SUBJECTS

In the preliminary study, we administered either Judgment Form A or B, counterbalanced, to 157 students (65% women; 35% men) in lower level psychology classes, with student and instructor permission (Time 1). Two days later (Time 2), we reentered the same classes and administered the alternate judgment form to a given participant. On both days, we followed the judgment scale with the mood scale.

Results

Cognitive-style scales such as the pleasant-unpleasant judgment scales have low interitem correlations, because each item asks about a different intellectual problem. Participants' answers will depend on intellectual ability and on general and recently encountered information; therefore, only a small proportion of each item's variance will represent the sought-after cognitive style. Given these constraints, the split-half reliabilities (used because of item heterogeneity) of the pleasant-unpleasant judgment scales were near optimal, Form A $r(157) = .63$, Form B $r(150) = .61$, comparing favorably to far longer scales (cf. Mayer et al., 1992). A principal components factor analysis yielded a two-factor structure for each individual scale identical to other findings in the literature, in which the first factor was one of scale bias unrelated to mood and the second factor represented pleasant-unpleasant judgment (Mayer et al., 1992). Standard scoring of the forms correlated with their pleasant-unpleasant judgment factors, Form A $r(157) = .90$, $p < .001$, Form B $r(150) = .92$, $p < .001$, indicating that the forms were factorially valid for measuring pleasant-unpleasant judgment. As expected, the scales also correlated with natural mood, Form A $r(153) = .34$, $p < .001$, Form B $r(149) = .34$, $p < .001$.

Because the preliminary study was conducted over a 2-day period, we could also conduct a test of whether mood changed with judgment over time. An initial analysis indicated that mean absolute mood change over the 2-day period was $M = 4.9$, $SD = 4.7$. The preliminary

study's design had been optimized for comparing the reliabilities and validities of Forms A and B by administering a mix of both forms each day. To test mood change over time, therefore, was nonoptimal, because it required *z* scoring Forms A and B to treat them as equivalent in a testing session. This procedure introduces error variance to the degree that either form's sample mean deviates from its expected value; nonetheless, a longitudinal test of mood-congruent judgment could be informative even under nonoptimal conditions. Therefore, Time 2 judgment was predicted with a regression in which Time 1 judgment and Time 1 mood were entered first to control for their baseline effects. When Time 2 mood was entered into the equation in the next step, mood change from baseline appeared unrelated to judgment change, change in $R(106) = .38$ to $.38$, $\Delta F = .01$, *ns*, and consequently, there was no evidence for the covariation of mood and judgment over time in this nonoptimal test.

DISCUSSION

Brief reliable and valid measures of mood-congruent judgment were developed in the preliminary study. Although mood and judgment correlated at each test session, there was no evidence of mood-judgment covariation over a 2-day period. Perhaps this was because too much error was introduced when we adjusted the Form A and Form B means so as to treat them as equivalent or because the time interval was too brief for change to have occurred. The main study was undertaken to correct both these issues and thereby provide more optimal tests of mood-judgment covariation over time. The main study was divided into two subsidiary studies, termed the initial and replication studies; each study was conducted over a two-week interval. The central hypothesis of the studies was that mood and judgment would change together over time.

MAIN STUDY

Method

SUBJECTS

Our longitudinal study was conducted within the Greek houses at the University of New Hampshire (UNH) during the 1990-1991 academic year. We contacted six sororities and two fraternities concerning participation in a longitudinal study of personality. Of these, two sororities and two fraternities were involved for the full length of the study.[1] Individual consent was obtained for participating house members.

The number of participants across the 4 weeks was 173, 150, 117, and 122, respectively, divided near evenly between women and men. Because some participants in later weeks had not been part of earlier testings, longitudinal sample size ranged between 85 and 100. Houses received a $50.00 honorarium for participation.

DESIGN

Participants were tested once each week for 4 weeks. During each testing period, a participant received one judgment scale and one mood scale. Over the 4 weeks, the participants received the judgment scales in the order ABAB or BABA; the mood scale was always the same. By conceptualizing the research as composed of two interleaved studies—Judgment Form A at Time 1 and 2, and Judgment Form B at Time 1 and 2—we had an initial study (employing Form A) and its largely independent replication (employing Form B) conducted over a 4-week period. Interleaving the alternate forms also caused participants to experience memory interference for prior test responses and thereby attenuated any artifactual consistency from that source.

MATERIALS

Judgment scales A and B. Judgment Forms A and B were employed without change from the preliminary study. Each form employed 12 questions to yield a single measure of pleasant-unpleasant judgment.

The mood scale. The BMIS was also repeated from the preliminary study.

PROCEDURE

The Greek houses were tested one at a time over the 1990-1991 academic year at their house meetings. Testing by house was staggered, because weekly meetings of UNH houses all take place on Monday afternoons, and it was decided to employ one experimenter (the second author) highly familiar with the Greek system to ensure establishing good research rapport within the houses. Once assembled for their meeting, participants were very generally instructed about what their involvement would consist of; there was no mention of specific subsequent testings or of study hypotheses. Participants were also asked not to discuss their participation with other students until the entire study had been completed.

For each weekly testing, the experimenter repeated some standard instructions and directions concerning an identifying code that was used in place of a name to connect booklets across weeks. The test booklets (Form A or B, followed by the mood scale) were then distributed and completed. Study participants took the experiment in a serious, matter-of-fact manner. Participants were debriefed only after all houses were through with the study.

TABLE 1: Interrelations Between Measures in Main Study

	Judgment Measures[a]				*Mood*			
	Initial		*Replication*		*Initial*		*Replication*	
	Time 1	*Time 2*	*Time 1*	*Time 2*	*Time 1*	*Time 2*	*Time 1*	*Time 2*
Judgment measures[a]								
Initial: Time 1								
Initial: Time 2	.54***							
Replication: Time 1	.50***	.63***						
Replication: Time 2	.41***	.65***	.65***					
Mood								
Initial: Time 1	**.39*** **	.28**	.27**	.38***				
Initial: Time 2	.39***	**.47*** **	.32**	.43***	.36***			
Replication: Time 1	.33***	.39***	**.38*** **	.29**	.46***	.45***		
Replication: Time 2	.17*	.38***	.31***	**.46*** **	.45***	.55***	.42***	
Mean	18.3	20.3	23.2	23.1	6.4	7.2	5.7	5.3
SD	7.3	7.5	6.2	6.3	6.9	8.3	8.3	8.8
n	171	114	149	119	173	117	150	122

NOTE: The four correlations in bold indicate that there were significant relationships between pleasant-unpleasant judgment and mood at each individual testing time.

a. Initial = testing with Form A; Replication = testing with Form B.

*$p < .05$, one-tailed. **$p < .005$, one-tailed. ***$p < .0005$, one-tailed.

RESULTS

Scale Characteristics

Our first analyses reexamined the measurement properties of the scales. Judgment Form A split-half reliability estimates for Time 1 and 2 in the initial study were $r(171) = .59$ and $r(114) = .70$, and for Form B in the replication, $r(149) = .58$ and $r(119) = .59$. The BMIS coefficient alpha reliabilities for Time 1 and 2 of the initial study were $r(173) = .78$ and $r(117) = .88$, and of the replication were $r(150) = .85$ and $r(122) = .88$.

The correlation matrix on the top of Table 1 shows the intercorrelations between the judgment and mood scales within and across testings. The four correlations in bold indicate that there were significant relationships between pleasant-unpleasant judgment and mood at each individual testing time. We next turned to the average amount of absolute mood change over the various intervals. The average absolute mood change over the shortest (7-day) interval was greater than that obtained over the 2-day period of the preliminary study ($M = 6.1$ vs. 4.5, respectively; $z = 1.89$, $p < .05$, one-tailed). The average absolute mood change increased nonsignificantly above the 7-day interval for the 14- and 21-day periods ($M = 6.3$ and 6.8, respectively; zs = 0.3, 0.9, *ns*).

Mood and Judgment Over Time

We tested whether mood changed with judgment over time by employing, as we had in the preliminary study, a hierarchical multiple regression that was repeated separately for the initial and replication studies. Each regression predicted Time 2 pleasant-unpleasant judgment. We first entered Time 1 judgment and Time 1 mood to partial out baseline judgment and mood levels. The regression's first step for the initial and replication studies is shown at the top left of Table 2. Time 1 judgment predicted Time 2 judgment in both studies. Time 1 mood did not predict Time 2 judgment in either study. The second step of the regression tested change from baseline (Table 2, top right). Time 2 mood improved prediction of Time 2 judgment, and this was highly significant in both the initial study, $\Delta F(91) = 16.1$, $p < .0001$, and the replication study, $\Delta F(86) = 20.6$, $p < .0001$. There are four additional week-to-any-subsequent-week comparisons possible; in each of these comparisons, the incremental prediction of Time 2 mood was individually significant at levels comparable to the 2-week case.[2] Two such further analyses shown at the bottom of Table 2 contrast a 1-week (first-to-second) interval to a 3-week (first-to-last) interval. The trend indicated that, as would be expected if mood change continued over time, Time 2 mood was more important in predicting Time 2 judgment in the longer rather than the shorter interval, although the difference in betas was too small to be significant. Because in every comparison within the present study Time 2 mood incrementally and significantly predicted Time 2 judgment, it was clear that mood and judgment changed together over time.

GENERAL DISCUSSION

Studies of natural mood prior to this one have indicated that mood changes over as short a period as 15

TABLE 2: Tests of Mood-Congruent Judgment Change Over Time: Predicting Judgment at Time 2 in a Hierarchical Multiple Regression Analysis

	Step 1			*Step 2*				
		Beta Weights			*Beta Weights*			
Testing Interval	R	*Mood Time 1*	*Judgment Time 1*	R	*Mood Time 1*	*Judgment Time 1*	*Mood Time 2*	ΔF
Planned analyses								
Initial	.53***	.04	.51***	.63***	−.07	.42***	.37**	16.1***
Replication	.65***	.04	.63***	.73***	−.10	.58***	.38***	20.6***
Other analyses								
1 week	.50***	.08	.46***	.55***	−.03	.42***	.27*	10.0*
3 weeks	.56***	.24	.42***	.72***	−.01	.43***	.53***	33.7***

NOTE: The initial study predicts Judgment Form A to Form A 2 weeks later; the replication predicts Judgment Form B to Form B 2 weeks later; different 2-week periods were combined for the analyses. The 1- and 3-week intervals predict from Form A to B and Form B to A; scores on Forms A and B were converted to *z* scores to equate their means and standard deviations for the 1- and 3-week analyses.
*$p < .005$. **$p < .001$. ***$p < .0005$.

minutes; in fact, spacing measures of mood and judgment 15 minutes apart reduces the correlations between the two by as much as $r = .1$ (Mayer et al., 1992; Mayer et al., 1988). Similarly, the influence of experimental mood inductions often dissipates within 5 to 10 minutes (Clark, 1983; Isen, Clark, & Schwartz, 1976). Surprisingly, therefore, the preliminary study failed to find evidence of mood-judgment covariation over a 2-day period. Perhaps the preliminary study's lower overall power accounted for this failure. But another possibility is that mood may be haphazardly reactive over the short term and that actual mood-judgment covariation may take time to develop. A real-life analogy might be to a sad person whose mood momentarily brightens when speaking to a friend but then reverts to its preceding sad level after the conversation is over. Substantive mood and judgment covariation might depend on more slowly covarying environmental and biological processes than on momentary oscillations. Whatever the reason, we did find conclusive evidence for mood-judgment covariation over 7-, 14-, and 21-day intervals. There was a nonsignificant trend of greater change over longer time periods.

Strengths and Weaknesses of the Present Findings

The present study rules out the possibility that cross-sectional natural mood-judgment correlations were due solely to long-term, fixed reports of mood and judgment; mood and judgment vary together across time. In addition, differential priming could not have occurred from the judgment task, for it was counterbalanced as to positive and negative content. Although the possibility remains that situations faced by participants both influenced mood and independently primed judgments, any such priming effects should have been reduced by memory interference by the time of testing. Moreover, many natural moods will have been triggered by noncognitive events (Eysenck, 1967; Parkinson & Manstead, 1992). Finally, the possibility exists that participants might have attempted to be consistent in their self-report of judgments with whatever mood they were in; but results from other studies argue against this interpretation. Extensive evidence argues convincingly against demand explanations (Fiske & Taylor, 1991). For example, mood-congruent judgment has been obtained when items were embedded in a statewide political telephone survey, which was very effective in hiding the hypothesis of the study (Mayer et al., 1992). Finally, two large-sample natural mood studies have indicated that order of presentation of mood and judgment measures, which can be used to manipulate demand, has no influence over the effect (Mayer et al., 1992; Mayer et al., 1988).

Stability Amidst Change

This article has concentrated on mood-judgment covariation; but there has also been evidence throughout that mood and judgment are both partially stable as well. Thus mood correlates with itself 3 weeks later at $r = .47$, and judgment correlates with itself at $r = .51$. Such findings are consistent with long-term memory-network and depressive-schemata explanations of individual differences in mood and judgment (Beck, 1967; Hamilton, 1983; Kuiper & Derry, 1982).

Implications of a Mood-State-Dependent Personality Subsystem

Knowing the present mood state of an individual can be used to increment prediction of that person's judgment beyond that predicted by any past characterization of the individual's judgments. Such incremental prediction will be generally useful, and especially so for those individuals high in neuroticism or negative affectivity who enter negative moods more frequently (Eysenck, 1967; Hepburn & Eysenck, 1989; Larsen & Diener, 1987). Knowing these mood states may also indicate the adaptive advantages of certain individuals in certain contexts (Mayer, 1986; Mayer et al., 1992). For example,

a person who undergoes mood-induced successive world perspectives may recall more possible interpretations of events, and even plan and prepare for more diverse futures than others (Haviland & Kramer, 1991; Mayer, 1986; Mayer et al., 1992). It may be for this reason that first-degree relatives of manic-depressive individuals exhibit more creativity than normal controls (Richards, Kinney, Lunde, Benet, & Merzel, 1988).

The personality system contains both relatively stable and changing subsystems. The changing part studied here may sometimes be observed by the stable part (Mayer & Gaschke, 1988).[3] Describing his deep depression, William Styron (1990) wrote

> of being accompanied by a second self—a wraithlike observer who, not sharing the dementia of his double, is able to watch with dispassionate curiosity as his companion struggles. (p. 64)

The suggestion that the stable portions of personality observe the changing portions may be important to examine further, for it may be in this way that a relatively unchanging portion of identity exerts its influence on the more malleable elements of one's being.

NOTES

1. Houses were enlisted by discussing the study with the (undergraduate) elected house president, who then consulted with and informed the house members and executive board (also undergraduates) about the nature and importance of the study (the specific hypotheses and variables were not revealed). The final decision to participate at the house level was based on agreement by both the president and the executive board. Nonetheless, two additional sororities dropped out of the study by failing to provide testing time to the experimenter beyond the second week.

2. We also attempted to predict future mood from judgment. We employed a hierarchical regression in which we first predicted Time 2 mood with Time 1 mood to control for the effects of overall mood level, and on a subsequent step entered Time 1 judgment. Time 1 judgment predicted future mood over and above initial mood levels significantly in one case ($p < .02$), with marginal significance in three cases ($p < .06$, .08, and .08), and with nonsignificance in two cases. Similarly, we attempted to predict future judgment from mood. Parallel to the above analysis, we first predicted Time 2 judgment with Time 1 judgment and subsequently entered Time 1 mood. Time 1 mood predicted future judgment in two of the six possible week-to-subsequent-week comparisons. Such findings suggest multidirectional causality.

3. Such stable observers are known to commonly accompany many changes in consciousness aside from moods, including dreams (LaBerge, Nagel, Dement, & Zarcone, 1981), hypnosis (Hilgard, 1977), and life-at-death experiences (Moody, 1980).

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