

Vivid Recollection as a Technique to Arouse Implicit Motive-Related Affect¹

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This study examined the links between implicit motives, pleasant experiences, and associated affect. Subjects high in the need for power (n Pow) or intimacy (n Int) recalled a pleasant or neutral personal experience. Consistent with past findings, content analyses revealed that recalled pleasant experiences reflected subjects, respective concerns for power and intimacy. Because the content of the pleasant memories of n Pow and n Int subjects differed, their vivid recollections were also expected to produce different affective states. Analyses of self-report affect measures administered after the recall task showed that n Int subjects who recalled a pleasant event expressed more happiness, elation, and friendliness. By contrast, n Pow subjects in the pleasant recall condition reported more excitation and anger. Findings suggest that positive affect inductions involving the vivid recall of idiographic material may lead to different specific affective states based on the content of those experiences and individuals' capacity to experience and sustain particular affective states.

Theory and research in personality suggest that motivation is at the basis of many complex patterns of affect, thought, and behavior. McClelland (1980, 1981, 1985) and colleagues (McClelland, Koestner, & Weinberger, 1989) have defined implicit (or operant) motives as dispositions reflecting recurrent preferences for particular qualities of affective experience (such as "feeling strong" for the need for power or "feeling close" for the need

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for intimacy). Motives tapped through operant measures are called "implicit" because individuals may not be aware of them. Implicit motives may be more closely linked to particular qualities of affective experience than other personality constructs (see McClelland et al., 1989, for a review).

According to the McClelland (1985) model of implicit motivation (also see Weinberger & McClelland, 1991), a sequence of responses is first triggered by a learned cue that represents an opportunity to engage in a motivationally arousing experience. This gives rise to an emotionally charged anticipatory goal state in which the motive is activated by the situation which, in turn, brings about an impulse to act, followed by learned behaviors that lead to a motivational "kick." This "kick" is brought about by a specific hormone pattern which corresponds to a specific affective state.

Individuals engage in specific kinds of behaviors to bring about these affective outcomes. Through repeated experience, cognitive-behavioral patterns develop that allow the individuals to regularly experience their preferred affective state (Weinberger & McClelland, 1991). Although there is ample evidence that implicit motives predict motive-relevant behavior, their links with affective and cognitive processes have not been studied extensively (Woike, 1992). There is, however, some evidence that implicit motives are related to specific cognitive processes. For instance, researchers have found that the content of significant personal memories are associated with individuals' implicit motives (McAdams, 1982; McAdams, Manfield, Day & Hoffman, 1993; Woike, 1995).

Agentic and Communal Motives

In considering the implicit motives that would likely be associated with different affective states, two very different implicit motives reflect a distinction central to many perspectives on personality (e.g., Bakan, 1966; McAdams, 1985; McAdams et al., 1993). This contrast is well articulated in Bakan's (1966) concepts of agency and communion, which refer to the need for independence and control and the need for connectedness and belonging, respectively. Important aspects of these orientations have been studied extensively in research programs examining the need for power and the need for intimacy. In this work, the need for power (*n* Pow) is described as a recurrent preference to have impact, control, and influence over another person, group, or the world at large (Winter, 1973), whereas the need for intimacy (*n* Int) refers to a recurrent readiness to experience warm, close, and communicative exchanges with others (McAdams, 1984).

Research on the power motive has shown that high *n* Pow individuals tend to experience motive arousal as a feeling of strength, vigor, and energy

(McClelland, 1985). Physiological changes that correspond to the arousal of the need for power include increases in epinephrine and norepinephrine, which seem to be the source of this “energized” subjective state (McClelland, 1989). When McAdams (1982) asked power-motivated people to describe a significant positive life experience, they told personal stories involving personal strength, control over others, vigorous activity, and enhanced prestige. Individuals high in *n* Pow engage in behaviors that impact the social environment to create and maintain this feeling of energy and excitement. For instance, they seek out more positions of influence, are more forceful and active in small groups, accumulate more prestigious possessions, write more letters to newspapers, and get into more arguments than those who are not high in *n* Pow (McAdams, 1990). These behaviors may maintain a state of excitement, which is the affective “kick” that is pleasurable and rewarding for the power-motivated individual (Weinberger & McClelland, 1991).

By contrast, it appears that high *n* Int individuals experience a different affective state associated with their motive. Arousal of the need for intimacy seems to be more closely linked to the feelings of happiness and love. There is no research to date on the physiological changes that correspond to the arousal of *n* Intimacy, but research on the need for affiliation (*n* Aff), which is akin to *n* Int, suggests that arousal involves physiological changes such as increases in dopamine which may contribute to a “happy/loving” subjective state (McClelland, 1989). In addition, the mutual eye gazing associated with intimacy may also produce neurohormones that lead to increased immune functioning and physical well-being (Argyle & Cook, 1976; McAdams, 1985; McClelland, 1985, 1989). When McAdams (1982) asked intimacy-motivated people to describe a significant positive life experience, they described experiences involving interpersonal interaction, emotional bonds, sharing, sympathy, and physical closeness. Intimacy-motivated individuals engage in behavior that involves *being* in a state of happiness and togetherness with others rather than *doing* things to force intimacy on others (McAdams, 1985). For instance, they tend to use the word *we* more, engage in more eye contact, and make fewer demands on others in group discussions (McAdams, 1990). They are described by their friends as being more “natural,” and “loving” and less “dominant.” Hence, these intimacy behaviors may maintain states of positive affect that are pleasurable and rewarding to those high in *n* Int.

To arouse the power and intimacy motive in the laboratory, researchers (e.g., McClelland, 1985; Woike, 1994; Woike & Aronoff, 1992) have constructed experimental situations that provide an opportunity to engage in experiences linked to motivational satisfaction. For instance, Woike and Aronoff (1992) created experimental situations in which *n* Pow and *n* Int

subjects anticipated interacting with others in ways that were motive-satisfying. Similarly, Woike (1994) told *n* Pow and *n* Int subjects that their scores on previous tests revealed that they were developing expertise in areas that pertained to their respective motives. In these studies, subjects in the motive-congruent conditions were more involved in the experience than other subjects, as demonstrated by differences in their cognitive processing of the situation. It is assumed that motive-related affective states are concomitant responses to these changes in cognitive processing.

The Present Study

In this experiment, power- and intimacy-motivated individuals were asked to vividly recall an experience that made them feel very happy. Because *n* Pow and *n* Int subjects are more likely to recall significant life events that relate to their respective motives (McAdams, 1982) and vivid imagery is considered an effective technique for affect induction (e.g., Larsen, Sinnett, & Kasimatis, 1988; Strack, Schwarz, & Gschneidinger, 1985; Velten, 1968; Williams, 1980), it was reasoned that the specific affective state linked to *n* Pow and *n* Int could be induced in subjects through their own vivid recollection of the power- and intimacy-related events. Hence, those in the vivid recall condition were expected to experience affect associated with their specific motive. In the positive arousal condition, *n* Pow subjects were expected to experience more excitement, alertness, and assertiveness and *n* Int subjects were expected to experience more happiness, elation and friendliness.

METHOD

Subjects

Approximately 600 introductory psychology students from the Michigan State University subject pool were prescreened for intimacy and power motivation. Distributions of intimacy and power scores were examined, and selection criteria were derived based on the sample distribution and selection criteria used in previous investigations (Woike, 1994; Woike & Aronoff, 1992). Subjects whose intimacy and power scores met these criteria (described below) were called back to participate in the experiment for which they received five dollars.

Implicit Motive Assessment

At an initial testing session, the Thematic Apperception Test (TAT) was administered in the standard group format (Atkinson, 1958) in which subjects had 5 min to write a story in response to each of six pictures. These six pictures have proven useful in the assessment of intimacy and power motivation (e.g., McAdams, Lester, Brand, McNamara, & Lensky, 1988) and can be found in Smith (1992).

Coders were trained in assessment through the coding manual for intimacy motivation (McAdams, 1984) and power motivation (Winter, 1973). Subjects' stories were scored for these motives following the standard procedure by the coders, who achieved at least a 90% agreement on practice materials. From these scores, separate distributions were formed for women and men. One hundred and twenty-one persons whose motive scores were in the top third on one motive and the lower half on the other were selected for the experiment. Women (age = 19-25 years, $M = 20.33$, $SD = 1.51$) had the following range of scores: high intimacy = 7 to 24, low power = 0 to 6, $n = 34$; high power = 7 to 17, low intimacy = 0 to 6, $n = 29$; and men (age = 19 to 25 years, $M = 20.60$, $SD = 1.35$) had the following range of scores: high intimacy = 6 to 11, low power = 0 to 6, $n = 27$; high power = 7 to 19, low intimacy = 0 to 6, $n = 31$. Examination of these distributions suggests that women generally scored higher on intimacy motivation than did men, which is consistent with the findings of an analysis of thematic stories written by over 1,500 subjects (McAdams et al., 1988). There appears to be no difference in the scores for women and men on power motivation, which is also consistent with past research findings (Winter, 1992).

Procedure

Research assistants unaware of the subjects' motive scores scheduled them in two- to six-person groups. Subjects were told that they would be participating in an experiment on the relationship between life experiences and memory. They were randomly assigned to complete one of two versions of the Life Experiences Questionnaire (LEQ), adapted from Strack et al. (1985), which asked them to either vividly recall a single event that was positive and pleasant that caused them to feel very happy or events in their lives that happened yesterday and were ordinary (as a control). Subjects then received instructions and performed a task unrelated to the present study and then completed a brief questionnaire on their current affective state. Last, subjects were debriefed thoroughly and given credit for their participation.

The Life Experiences Questionnaire

The instructions of the LEQ were adapted from Strack et al. (1985) and were as follows:

[positive condition] We are interested in studying the relationship between memory and emotion. Today we are interested in happiness. To study the relationship between memory and happiness, we would like you to recall a single positive and pleasant event in your life that caused you to feel very happy at the time it occurred. Use the rest of this sheet (and back if necessary) to write down the event as you now remember it. In particular, please describe how the event came about—as *vividly* as you can. In fact, before you begin writing, take a few minutes to try to re-experience this event as vividly as possible. Then, take about 10 minutes to write your description.

[control condition] We are interested in studying the relationship between memory and personal experiences. Today we are interested in common, everyday personal experiences. To study the relationship between memory and personal experiences, we would like you to recall the events that happened to you *yesterday* that seemed to be small, everyday events at the time they occurred. Use the rest of this sheet (and back if necessary) to write down the events as you now remember them. Before you begin writing, take a few minutes to think about these events. Then, take about 10 minutes to write your description.

The Affect Questionnaire

After the recall task, all subjects were given a “Participant Information Sheet,” which they were told was a survey of how people feel after being in psychology experiments. They used 9-point scales (1 = *not at all*, 9 = *extremely much*) to rate affect descriptors as to how they were feeling “right now” or immediately after the experiment. The adjectives were randomized and included the six relevant to predictions: *happy, elated, friendly, excited, alert, and assertive*. The following “filler” adjectives were also included: *distraacted, calm, depressed, anxious, confused, and angry*. This questionnaire was constructed to be brief so that it could be administered and completed before the affective state produced by the LEQ dissipated.

Thematic Analysis of the LEQ

The LEQ responses were analyzed using the scoring system for autobiographical memories developed by McAdams (1982). Power imagery was defined as (a) enhanced perception of their own physical or psychological strength, (b) exertion of influence or control over others, (c) vigorous activity, and (d) an increase in fame or prestige. Intimacy imagery was defined as (a) interpersonal interaction, (b) increases in loving/liking or emotional bonds between people, (c) communication and sharing with others, (d) sym-

pathy and showing concern for others, and (e) touching and physical closeness. The responses from the LEQ were scored for these categories so that each protocol received a score ranging from 0 to 4 on power imagery and a score ranging from 0 to 5 on intimacy imagery. These protocols were scored by two coders who were unaware of the hypotheses or motives of the subjects. Interrater reliability was high, $r = .98$ for power imagery and $r = .92$ for intimacy imagery. The average of the coders' scores were used for the dependent measures.

RESULTS

Analyses of Motive-Related Imagery

Two 2(Motive: Intimacy vs. Power) \times 2(Gender: Women vs. Men) \times 2(Arousal Condition: Positive vs. Neutral) analyses of variance (ANOVAs) were conducted on the imagery scores. In each analysis one imagery mean in the positive arousal condition was expected to be greater than the others. Hence, three nonorthogonal comparisons were conducted: between the two means in the positive arousal condition, and between the mean predicted to be largest in the positive arousal condition and each mean in the neutral arousal condition.

Simple effects tests were conducted on those means that comprised unpredicted significant interactions to most fully discover the pattern. Two-tailed probabilities were used to determine the significance level in these cases.

Intimacy Imagery. The 2(Motive) \times 2(Gender) \times 2(Arousal Condition) ANOVA conducted on the intimacy imagery scores revealed a main effect for motive, $F(1, 113) = 6.19, p < .01$, in which intimacy-motivated individuals generally recalled experiences that contained more intimacy imagery ($M = 1.21$) than did power-motivated individuals, ($M = 0.71$). There was also a main effect for the arousal condition, $F(1, 113) = 9.62, p < .006$, in which individuals in the positive arousal condition used more intimacy imagery ($M = 1.22$) than did individuals in the neutral arousal condition, ($M = 0.66$).

These main effects were qualified by a strong predicted Motive \times Arousal Condition interaction, $F(1, 113) = 7.89, p < .006$. Tests of the pattern of means supported the expectation that n Int subjects in the positive arousal condition would use more intimacy imagery than others: n Int subjects in the positive arousal condition had more intimacy imagery ($M = 1.72$) than did n Pow subjects in the positive arousal condition ($M = 0.73$), $t(113) = 3.66$, than did n Int subjects in the neutral arousal condition

($M = 0.58$), $t(113) = 4.17$, and than did n Pow subjects in the neutral arousal condition ($M = 0.71$), $t(113) = 3.74$, $p < .0005$ for each.

In addition, there was a strong main effect for gender, $F(1, 113) = 11.82$, $p < .0008$, in which women generally had more intimacy imagery ($M = 1.27$) than did men ($M = 0.60$). This main effect was qualified by a Gender \times Arousal Condition interaction, $F(1, 113) = 4.24$, $p < .04$. Tests of the means showed that women in the positive arousal condition used more intimacy imagery ($M = 1.73$) than did men in the positive arousal condition ($M = 0.72$), $t(113) = 3.73$, than did women in the neutral arousal condition ($M = 0.79$), $t(113) = 3.50$, and than did men in the neutral arousal condition ($M = 0.49$), $t(113) = 4.35$, $p < .001$ for each, two-tailed.

Table I displays the mean frequencies of intimacy imagery within the 2(Motive) \times 2(Gender) \times 2(Arousal Condition) design. The three-way interaction for intimacy imagery did not approach significance, $F < 1$.

Power Imagery. A 2(Motive) \times 2(Gender) \times 2(Arousal Condition) ANOVA was conducted on the power imagery scores. This analysis revealed a marginal main effect for motive, $F(1, 113) = 3.69$, $p < .06$, in which power-motivated individuals used more power imagery ($M = 0.73$) than did intimacy-motivated individuals ($M = 0.47$). There was also a strong main effect for the arousal condition, $F(1, 113) = 35.18$, $p < .0001$, in which those in the positive arousal condition wrote experiences that con-

Table I. Mean Number of Intimacy and Power Imagery Categories Identified (and Standard Deviations) for Motive, Gender, and Arousal Conditions^a

	Arousal condition							
	Positive				Neutral			
	<i>n</i> Int		<i>n</i> Pow		<i>n</i> Int		<i>n</i> Pow	
	Women	Men	Women	Men	Women	Men	Women	Men
Imagery								
Intimacy	2.23 (1.70)	1.20 (1.56)	1.23 (1.07)	0.23 (0.90)	0.82 (0.69)	0.33 (0.61)	0.75 (0.82)	0.64 (0.68)
Combined	1.72 _a (1.65)		0.73 _b (1.06)		0.58 _b (0.68)		0.71 _b (0.75)	
Power	0.53 (0.68)	1.00 (0.99)	0.92 (0.84)	1.41 (1.02)	0.18 (0.40)	0.17 (0.35)	0.37 (0.51)	0.14 (0.39)
Combined	0.76 _a (0.84)		1.17 _b (0.92)		0.17 _a (0.38)		0.26 _a (0.45)	
<i>n</i>	17	15	13	17	17	12	16	14

^aStandard deviations are in parentheses and cell sizes appear at the bottom of the table. Means that do not share a subscript are significantly different at $p < .05$, by planned comparisons, within each row. *n* Int = need for intimacy, *n* Pow = need for power.

tained more power imagery ($M = 0.97$) than did those in the neutral arousal condition ($M = 0.22$). Although the Motive \times Arousal Condition interaction was not significant, $F(1, 113) = 1.53$, the planned comparisons of the means supported the prediction that n Pow subjects in the positive arousal condition used more power imagery ($M = 1.17$) than did n Int subjects in the positive arousal condition ($M = 0.76$), $t(113) = 2.35$, $p < .02$, than did n Int subjects in the neutral arousal condition ($M = 0.17$), $t(113) = 5.61$, $p < .0001$, and than did n Pow subjects in the Neutral Arousal condition ($M = 0.26$), $t(113) = 5.15$, $p < .0001$.

There was also a main effect for gender, $F(1, 113) = 4.54$, $p < .03$, in which men used more power imagery ($M = 0.74$) than did women ($M = 0.48$). The main effects for gender and arousal condition were qualified by a Gender \times Arousal Condition interaction, $F(1, 113) = 6.24$, $p < .01$. Tests of the means showed that men in the positive arousal condition used more power imagery ($M = 1.21$) than did women in the positive arousal condition ($M = 0.73$), $t(113) = 2.76$, $p < .01$, two-tailed, and than did women ($M = 0.28$) and men ($M = 0.15$) in the neutral arousal condition, $t(113) = 5.48$ and 5.87 , respectively, $p < .0001$ for both, two-tailed.

The mean frequencies of power imagery within the 2(Motive) \times 2(Gender) \times 2(Arousal Condition) design can be found in Table I. The three-way interaction for power imagery did not approach significance, $F < 1$.

Analyses of the Affect Measure

The three affect ratings associated with intimacy were positively related, r ranging from .51 to .70, $p < .001$ for each. The three affect ratings associated with power were not positively correlated; and alertness and assertiveness were positively correlated with the three intimacy affect ratings, r ranging from .24 to .34, $p < .05$ for each. Hence, the ratings from the relevant affect scales were examined through separate 2(Motive) \times 2(Gender) \times 2(Condition) ANOVAs.

In each analysis, one mean in the positive arousal condition was expected to be greater than the others. N Int subjects were expected to have higher ratings on happiness, elation, and friendliness; and n Pow subjects were expected to have higher ratings on excitement, alertness and assertiveness. Again, three comparisons were conducted: between the two means in the positive arousal condition, and between the mean predicted to be largest in the positive arousal condition and each mean in the neutral arousal condition. Simple effects tests were conducted on those means that comprised a significant interaction to most fully understand the pattern if it had not been uncovered by the planned comparisons.

The analysis of the happiness ratings revealed, as expected, a Motive \times Arousal Condition interaction, $F(1, 113) = 6.57, p < .01$. The means in Table II reveal that *n* Int subjects in the positive arousal condition reported

Table II. Means and Standard Deviations of Affect Ratings, on 9-point scales, for Motive and Arousal Conditions^a

	Arousal condition			
	Positive		Neutral	
	<i>n</i> Int	<i>n</i> Pow	<i>n</i> Int	<i>n</i> Pow
Intimacy-related				
Happy	6.21 _a (1.47)	5.07 _b (1.76)	5.59 _{ab} (1.74)	5.94 _a (1.46)
Elated	5.45 _a (1.72)	3.71 _b (2.23)	4.66 _{ab} (2.13)	4.93 _a (1.88)
Friendly	7.18 _a (1.38)	5.91 _b (2.03)	6.75 _a (1.41)	6.82 _a (1.52)
Power-related				
Excited	3.93 _a (1.53)	5.34 _b (2.79)	4.31 _{ab} (2.12)	3.61 _a (1.54)
Alert	6.19 (1.06)	6.64 (1.74)	6.21 (1.36)	6.43 (1.49)
Assertive	5.72 (1.81)	5.71 (1.68)	5.47 (1.40)	4.89 (1.72)
Filler items				
Angry	0.72 _a (1.22)	1.58 _b (2.26)	0.91 _{ab} (1.70)	0.56 _a (1.28)
Distracted	3.15 (1.79)	3.86 (2.01)	3.09 (1.22)	3.08 (1.69)
Calm	6.64 (1.42)	6.40 (1.18)	6.88 (1.57)	6.68 (1.49)
Depressed	1.28 (1.07)	1.54 (1.40)	1.80 (1.61)	1.58 (1.35)
Anxious	4.45 (1.68)	4.72 (1.59)	3.59 (2.18)	4.60 (1.86)
Confused	1.73 (1.87)	2.45 (2.21)	1.84 (2.14)	1.39 (1.98)

^aAffect ratings are scaled positively, (i.e., 9 = *extremely* and 1 = *not at all*). Noncommon subscripts indicate that the means within the row differ significantly at $p < .05$. Standard deviations are in parentheses. *n* Int = need for intimacy, *n* Pow = need for power.

more happiness than did *n* Pow subjects in the positive arousal condition, $t(113) = 2.77, p < .005$. But the reported happiness of *n* Int subjects in the positive arousal condition did not differ from the *n* Int subjects in the neutral arousal condition, $t(113) = 1.49, n.s.$ The pattern further revealed that happiness ratings for *n* Pow subjects in the positive arousal condition were significantly *lower* than those for *n* Pow subjects in the neutral arousal condition, $t(113) = 2.08, p < 0.05$, two-tailed. The ANOVA uncovered no other significant findings.

The analysis of the elation ratings revealed a main effect for motive, $F(1, 113) = 4.47, p < .04$, in which *n* Int subjects reported more elation ($M = 5.05$) than did *n* Pow subjects ($M = 4.35$). There was also an unpredicted main effect for gender, $F(1, 113) = 4.60, p < .03$, in which men reported more elation ($M = 5.12$) than did women ($M = 4.26$). And as expected, the analyses revealed a strong Motive \times Arousal condition interaction, $F(1, 113) = 7.86, p < .006$. Examination of the means in Table II showed that *n* Int subjects in the positive arousal condition reported more elation than *n* Pow subjects in the positive arousal condition, $t(113) = 3.47, p < .001$. But again, the elation ratings between *n* Int subjects in the positive and neutral arousal conditions did not differ $t(113) = 1.56, n.s.$; and the elation ratings for *n* Pow subjects in the positive arousal condition were significantly lower than those for *n* Pow subjects in the neutral arousal condition, $t(113) = 2.40, p < .02$, two-tailed.

On the friendliness ratings, the analysis yielded a main effect for motive, $F(1, 113) = 4.44, p < .04$, in which *n* Int subjects generally reported more friendliness ($M = 6.97$) than did *n* Pow subjects ($M = 6.36$). In addition, the predicted Motive \times Arousal Condition interaction, $F(1, 113) = 5.71, p < .02$, was found. Examination of the means in Table II reveals that *n* Int subjects in the positive arousal condition reported more friendliness than *n* Pow subjects in the positive arousal condition, $t(113) = 3.17, p < .001$. Again, the friendliness ratings between the *n* Int subjects in the positive and neutral arousal conditions did not differ, $t(113) = 1.06, n.s.$; the friendliness ratings for *n* Pow subjects in the positive arousal condition were significantly lower than those for *n* Pow subjects in the neutral arousal condition, $t(113) = 2.24, p < .02$, two-tailed.

On the excitement ratings, there was a strong predicted Motive \times Arousal Condition interaction, $F(1, 113) = 7.79, p < .006$. Analyses of the means in Table II showed that *n* Pow subjects in the positive arousal condition reported significantly more excitement than did *n* Int subjects in the positive arousal condition, $t(113) = 2.68$, and than did *n* Pow subjects in the neutral arousal condition, $t(113) = 3.25, p < .005$ for each. No other effects approached significance.

The ANOVAs on the alertness and assertiveness ratings yielded no significant effects and the means did not demonstrate the predicted pattern.

The other affect ratings were analyzed within $2 \times 2 \times 2$ ANOVAs. Only one significant effect emerged, a Motive \times Arousal Condition interaction on the anger ratings, $F(1, 113) = 3.93, p < .05$. Simple effects tests of the means found in table II revealed that n Pow subjects in the positive arousal condition reported more anger than did n Int subjects in the positive arousal condition, $t(113) = 1.99$, and than did n Pow subjects in the neutral arousal condition, $t(113) = 2.35, p < .05$ for each, two-tailed.

DISCUSSION

Theory and research maintain that two contrasting implicit motives, the need for power and the need for intimacy, are associated with different affective states. Considering that researchers have found that n Pow and n Int individuals are more likely to recall significant life events (McAdams, 1982) and most memorable experiences (Woike, 1995) that correspond with their respective motives, and that vivid imagery is a technique commonly used to induce affect (e.g., Strack et al., 1985; Velten, 1968), the vivid recollection of a motive-relevant experience was expected to induce motive-related affect.

Consistent with past findings (McAdams, 1982; Woike, 1995), the positive experiences that subjects chose to recall were significantly determined by their implicit motives. Power-motivated individuals chose positive experiences pertaining to personal strength, control, vigor, prestige, and recognition, while intimacy-motivated individuals chose positive experiences involving loving, caring, empathy, and closeness between people.

The results of the self-report affect measure administered after the recall task showed that in the positive arousal condition n Int subjects reported significantly more happiness, elation, and friendliness than their positively aroused n Pow counterparts. In fact, vividly recalling a *positive* power-related experience led n Pow individuals to feel significantly *less* happy, elated, and friendly. Because these ratings did not differ between the positive and neutral arousal conditions for n Int individuals, the main discovery appears to be that recalling a positive event suppresses feelings of happiness, elation, and friendliness for the power-motivated individual. This provides clear evidence that the vivid recall of a *positive* autobiographical memory can lead to different specific affective outcomes.

When the affect ratings associated with power were examined, the predictions were only partially supported. The n Pow subjects in the positive arousal condition reported more excitement, but curiously *not* more alert-

ness or assertiveness. An unpredicted interaction on the anger ratings showed that *n* Pow subjects in the positive arousal condition reported more anger than others. It is important to note that the power-motivated subjects were not more angry generally, for instance, because they were in the experiment, but only after they reexperienced a *pleasant* event. Why would they reexperience a positive event, and then report feeling angry?

Because both men and women high in *n* Pow report being more angry and having more thoughts about doing aggressive things than others, McClelland (1975, 1985) suggested that they may view themselves negatively. For instance, when *n* Pow subjects were asked to endorse any of 300 adjectives that they thought were self-descriptive, they chose surprisingly negative descriptors, such as *rebellious*, *resentful*, *sulky*, *cynical*, and *bitter*, but *not* more positive expressions, such as *active*, *adventurous*, *courageous*, and the like. The apparent bias toward negative self-descriptions may have revealed itself in the present study in which *n* Pow subjects reported feeling more angry, but not more assertive. In future investigations, it may be informative to delve more deeply into the subjective state of *n* Pow subjects. For instance, is their brand of pleasure, in fact, *unpleasant*? The fact that *n* Pow subjects experience negative excitation *instead of* happiness (or what is typically referred to as “good mood”) suggests a differential sensitivity to negative over positive mood states (cf. Gray, 1981; Larsen & Ketelaar, 1989, 1991). It appears that *n* Pow individuals may not be able to experience deeply and/or sustain generic happiness or a “good mood” in the same way as *n* Int individuals.

There were interactions between gender and arousal condition on the power and intimacy imagery. The findings were consistent with gender type: Men recalled positive events that contained more power imagery and women recalled positive events that contained more intimacy imagery. It is important to note that there were no such interactions on the affect ratings. That is, men and women who generally used more power and intimacy imagery, respectively, in their pleasant experience descriptions did not experience the motive-associated affective state. This suggests that the vivid recollection of motive-related imagery only leads to affective arousal for subjects *high in the motive*.

The findings are informative on the general use of vivid recollection as a technique to induce affect. Researchers have often gone to greater lengths to arouse affect in order to explore its influence on a wide array of social cognitive processes (e.g., Blaney, 1986; Forgas, 1991; Gerrards-Hesse, Spies, & Hesse, 1994; Isen, 1984). These data suggest that using the vivid recollection of positive personal experiences to induce global positive affect may not be effective for all subjects, and that recalling a positive experience can actually suppress affect typically associated with positive

mood induction procedures. Therefore, it is important to replicate the study with a broader sample of affect adjectives such as those provided by instruments widely used in affective induction experiments, such as the Positive and Negative Affect Schedule (PANAS; Watson, Clark, & Tellegen, 1988) or the Multiple Affect Adjective Checklist—Revised (MAAC-R; Zuckerman & Lubin, 1985).

It is concluded that the vivid recollection of idiographic material can lead to different specific affective states based on the content of those experiences and individuals' capacity to experience and sustain particular affective states. There may be other personality variables linked to a differential susceptibility to positive and negative emotional states (e.g., Gray, 1981; Larsen & Ketelaar, 1989, 1991). Thus, individual differences in motivation should be taken into account when attempting to arouse affective states through the vivid recall of idiographic and/or motivationally relevant material.

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