Are Implicit Motives the Need to Feel Certain Affect? Motive–Affect Congruence Predicts Relationship Satisfaction

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Abstract

The authors test the assumption that the core of implicit motives is the desire for particular affective experiences and that motive satisfaction need not be tied to any particular domain. Using the context of romantic relationships, cross-sectional Study 1 and experimental Study 2 showed that people with a high affiliation motive were more satisfied when they experienced more affiliation-specific affect (calmness and relaxation). However, people with a higher power motive were more satisfied in their relationships when they experienced more power-specific affect (strength and excitement) in these relationships. The results support the idea that an implicit motive involves the desire for specific affective experiences and that frequent experiences of one's preferred affect can lead to enhanced satisfaction and well-being in a domain, even one that is not typically associated with that motive.

Keywords

implicit motives, affiliation motive, power motive, positive affect, relationship satisfaction, motive–affect congruence

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Research shows that people achieve satisfaction and enhanced well-being when they are successful in domains that allow them to satisfy their implicit motives (Baumann, Kaschel, & Kuhl, 2005; Brunstein, Schultheiss, & Grässmann, 1998; Hofer & Chasiotis, 2003). According to this research, an implicit power motive typically predicts well-being in the context of power-goal striving (such as a work setting), whereas an implicit affiliation motive typically predicts well-being in the context of affiliation-goal striving (typically in relationship contexts). Thus, most commonly, a given motive is seen as suggesting a domain of endeavor in which a person can reach satisfaction. In this view, a person with a high power motive who pursues an affiliation goal, like spending more time with a romantic partner, should experience less pleasure and satisfaction, even when he or she succeeds, when compared with a person with a high affiliation motive. In fact, within the domain of close relationships, the affiliation-intimacy motive is typically a positive predictor of satisfaction (McAdams & Vaillant, 1982), whereas the power motive has been found to be a negative predictor of relationship satisfaction (Stewart & Rubin, 1974).

In this article, however, we approach implicit motives as involving the need to feel certain affect. This means that experiences of motive-specific affect, affect that satisfies a person's implicit motive disposition—no matter which motive and no matter which domain the affect is experienced in—can contribute to high satisfaction. Specifically, we hypothesize that people with a higher power motive can indeed be satisfied in their relationships if they frequently *feel strong and excited* when they are with their partner. However, we predict that people with a high affiliation motive should feel more satisfied in their relationship when they frequently *feel calm and relaxed* when with their partner.

Implicit Motives and Specific Affective Experiences

McClelland and colleagues (McClelland, 1985; McClelland, Koestner, & Weinberger, 1989; Weinberger & McClelland, 1990), in fact, defined implicit motives as dispositions reflecting recurrent desires for particular qualities of affective experiences. They assumed that implicit motives develop very

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early, in the preverbal phase of life (McClelland & Pilon, 1983), triggered by natural incentives, which are pleasurable affective experiences like the "pleasurable excitement that is a built-in response to the experience of having impact" (McClelland, 1985, p. 138). Hence, the core of each implicit motive disposition was seen as the quest for a satisfying affective experience. Although today's implicit motive research retains this initial definition, it is common to think of the satisfying affective experience in a nonspecific way in the sense that power-motivated people experience pleasure while having impact, and affiliation-motivated people experience pleasure while being connected to other people (Schultheiss & Brunstein, 2010). However, McClelland's initial assumption went further, suggesting that each motive aims at the attainment of a *specific affective experience*, that the affective states associated with affiliation or with power are different, and that individuals seek the one more than the other because they experience one affective state as more pleasurable than the other (Weinberger & McClelland, 1990). According to McClelland, then, what affective experiences people seek and find satisfying is at the heart of their motive dispositions.

So far, only a few empirical studies have explored this assumption. They have done so, for example, by testing whether people report different emotions when thinking of power, affiliation, or achievement experiences and whether implicit motive dispositions determine what emotions people report when thinking of these experiences (Woike & Polo, 2001; Zurbriggen & Sturman, 2002). The results have been inconclusive, perhaps in part because different researchers have proposed different emotion-motive pairings. For example, Zurbriggen and Sturman (2002) attempted to link anger/excitement to power, interest/surprise to achievement, and happiness/love to affiliation. Woike and Polo (2001), however, more generally proposed that the power motive would be linked to more negative affect and the affiliation motive to more positive affect when recalling motive-congruent experiences. Importantly, previous studies tested only whether implicit motives determine what emotions are reported when thinking about or recalling motive-relevant situations. They did not ask whether implicit motives determine what emotions are experienced as satisfying. To answer this question about specific affective states as core incentives for implicit motives, one has to test whether people are more satisfied when they experience the right motive-specific affective states—no matter what the specific context is. This is the approach we take in the present research. We also make a new attempt to propose and empirically test connections between specific affect and the implicit motives for power and affiliation.

Power-specific affect. McClelland (1985) suggested anger-excitement as the basic affect connected to the power motive, explicitly noting that he did not consider anger-excitement in relation to impact and power to be a negative emotion. Indeed, later researchers replaced "anger" with the words "strength" and "vigor" (e.g., Fodor, 2010). In the present research, we adopt these conceptions and proposed that the high-arousal affective states of excitement and strength are the core incentive of the power motive.

There is strong evidence for the link between high-arousal states and the power motive from experimental studies in which the arousal of the power motive (e.g., social dominance challenges) leads to increased blood pressure (Fontana, Rosenberg, Marcus, & Kerns, 1987), muscle tone (Fodor, 1985), and increased energy supply to the muscles (L. W. Tsai & Sapolsky, 1996). These biophysiological processes are triggered by changes in epinephrine and norepinephrine metabolites observed in response to power motive arousal (Hall, Stanton, & Schultheiss, 2010; McClelland, Davidson, & Saron, 1985; McClelland, Ross, & Patel, 1985; Schultheiss, 2007). Especially for men with a high power motive, the experience of dominance, social success, and assertiveness go hand in hand with high testosterone levels (e.g., Albert, Jonik, & Walsh, 1992; Mazur & Booth, 1998; Schultheiss & Rohde, 2002). Important for our research is that people with high levels of testosterone also report feelings of vigor and activation (Dabbs, Strong, & Milun, 1997; Sherwin, 1988). For women, levels of estradiol vary with outcomes in social dominance contests and with the power motive—Winners with a high power motive showed increased estradiol levels (Stanton & Schultheiss, 2007). Both, testosterone and estradiol, are related to the reward system of the brain and increased dopamine release (Bless, McGinnis, Mitchell, Hartwell, & Mitchell, 1997; Hu & Becker, 2003; Russo et al., 2003; Schultheiss, 2007; Stanton & Schultheiss, 2007). Thus, the endocrine response (moderated by the power motive) appears to scale the reward value of social dominance in men and women via high-arousal states experienced as strength, vigor, and excitement. This speaks in favor of our assumption that people with a high power motive find these feelings more rewarding. Taken together, this research supports the idea that high-arousal states and, more specifically, feelings of strength and excitement are the core affective incentives of the power motive.

Affiliation-specific affect. McClelland originally paired the affiliation motive with joy-happiness. Subsequent research, however, suggests that happiness is not a consequence specifically of affiliation-goal attainment but rather the result of people reaching goals that are congruent with their motive dispositions whatever those motives are (Brunstein et al., 1998; Zurbriggen & Sturman, 2002). That is, joy-happiness seems to result from motive satisfaction in general and is not specifically coupled with the experience of affiliation. These findings suggest that it is worth questioning joy-happiness as the core incentive for the affiliation motive. In the present research, we propose that the affective states that are linked to the satisfaction of the affiliation motive are characterized by low-arousal positive affect like feeling calm, relaxed, and peaceful.

We derive this proposal from the developmental perspective on the implicit affiliation motive and from attachment theory. As mentioned above, implicit motives are assumed to develop very early, in the preverbal phase of life (McClelland

& Pilon, 1983). According to attachment theory, the function of bonding during the first years of life is to keep the child near a caregiving person to foster security (Bowlby, 1973). Particularly under conditions of threat and distress, the attachment system triggers affiliative behavior aiming at attaining security, protection, and consolation (Borelli et al., 2010; Cassidy, 1994). The emotional experiences accompanying these basic experiences of connectedness to another person are feelings of comfort and calmness (Cassidy, 2000). Accordingly, one can hypothesize that these positive affective states of low arousal—calmness, relaxation, peacefulness—form the primary affective incentive of the affiliation motive.

Research on biopsychological correlates of the implicit affiliation motive supports our assumption. There is empirical evidence suggesting that the implicit affiliation motive is linked to parasympathetic nervous system activity (as indicated by blood pressure and immune system function), which is responsible for the rest and recovery process of the body (Hall et al., 2010; Jemmott, 1987; McClelland, 1989). There is a bidirectional relationship between affiliation and attachment, and anxiolytic neuroactive substances like opioids and oxytocin (Depue & Morrone-Strupinsky, 2005; Heinrichs, Dawans, & Domes, 2009) aiming at relaxation and stress reduction. Furthermore, Schultheiss, Wirth, and Stanton (2004) found that the arousal of the affiliation motive leads to an increase in progesterone, which exerts anxiolytic and sedative effects (see also Wirth & Schultheiss, 2006), hence, making people calm and relaxed. Taken together, these relations support the idea that affiliation motivation aims at arousal reduction and the experience of comfort and relaxation.

To summarize, in the present research, we suggest links between implicit motives and specific affective states that build on McClelland's assumptions but take into account newer findings and suggestions from related theories. We propose that the power motive can be seen as the enjoyment of and desire to experience affective states of high arousal such as feeling strong, excited, and energetic. We further propose that the affiliation motive, however, aims at low-arousal states such as feeling calm, relaxed, and peaceful.

Specific Positive Affect in Romantic Relationships

We used romantic relationships as the testing ground for our proposals. As noted above, relationships are typically seen as the province of the affiliation motive, but according to our hypotheses, individuals high in the power motive should enjoy their relationships to the extent that the relationships allow them to feel strong and excited. In contrast, those high in the affiliation motive should feel satisfied in their relationships to the extent that they feel calm, relaxed, or peaceful in them.

The role of positive emotions in relationship satisfaction has been investigated by Aron, Norman, Aron, McKenna, and Heyman (2000), who have focused on feelings of excitement versus boredom in long-term romantic relationships, and found excitement to be a strong predictor of relationship satisfaction. A series of experiments showed that couples who were led to engage in exciting activities together reported higher relationship satisfaction when compared with control couples with no activity or just pleasurable, but not exciting, activities (Aron et al., 2000; see also Reissman, Aron, & Bergen, 1993). According to this research, it is high-arousal positive affect that contributes to relationship satisfaction, because it most strongly resembles the exciting state of passion from the beginning days of a romantic relationship.

However, other research suggests that activities low in arousal might enhance people's satisfaction with their relationship as well. One experimental study explored the influence of activity type—playing games, watching TV, or relaxing with a romantic partner or close friend—on relationship satisfaction. In fact, the "relax" condition produced the highest satisfaction in couples (Flora & Segrin, 1998).

Overall, the literature on low-arousal affect within close relationships is limited, which is perhaps a result of a long theoretical tradition in which physiological arousal is seen as an essential component of emotional experience (e.g., James, 1884; Mandler, 1990; Schachter & Singer, 1962). Furthermore, researchers and lay persons seem to care more about the "hot" emotional states in close relationships (Berscheid & Ammazzalorso, 2004; at least in Western culture, see Tsai, 2007).

With the present research, we aimed to redress this imbalance by looking at positive, high- *and* low-arousal affect within romantic relationships. Furthermore, we propose that implicit motives moderate the effect of specific affective experiences with the partner on individuals' relationship satisfaction. In particular, we hypothesize that feeling excited and strong in a relationship contributes to high relationship satisfaction, specifically for people with a higher power motive. However, feeling calm and relaxed with the partner is conducive to relationship satisfaction specifically for people with a higher affiliation motive.

The Present Research

We tested our hypothesis in two studies. In Study 1, we aimed to show the relationship between reported frequencies of power-specific affect (e.g., strength, excitement) versus affiliation-specific affect (e.g., calmness, peacefulness) and relationship satisfaction, and to test the hypothesis that this relationship is moderated by implicit motives. In Study 2, an experimental study, we made one of the two emotional states salient for our participants and tested the causal assumption that motive-specific emotions enhance relationship satisfaction for people with corresponding motive dispositions.

Study 1

In this cross-sectional study, we asked people in romantic relationships to report the extent to which they experienced

different affective states in their relationship. Our purpose was to determine whether implicit motives for affiliation and power moderate the relationship between the frequency of motive-specific affect experienced with the partner and relationship satisfaction.

Method

Participants and Procedure. Participants were recruited by flyers, online ads, and from a university participant pool. They were invited to participate in a "study on relationships, leisure, and work," and received US$15 for participation in the whole study. To enhance sample homogeneity and to ensure that our findings were applicable to stable, long-term relationships, we included participants who were in a romantic relationship for at least 1 year and who were currently employed. The study consisted of two parts, an online questionnaire and an in-person implicit motive assessment. Right after signing in for the study, participants received a link to the online questionnaire in which demographics, relationship satisfaction, and emotions in the relationship were assessed. Participants were then invited to come to the lab for the second part of the study, where they completed a measure of implicit motives and a series of questionnaires not related to this project. Of the 122 participants who completed the first part online, 78 came to the lab to participate in the second part, the implicit motive assessment (24 male, 53 female, 1 did not indicate gender). Participants who came to the lab did not differ on any variables from participants who did not participate in the second part, $t(120) < 1.20$. Their average age was 28 (SD = 10.85), ranging from 19 to 66. Mean relationship duration was 3.61 years (SD = 4.58 years), ranging from 1 year to 25 years.

Measures

Implicit motives. A picture story exercise (PSE) was administered to assess participants' implicit motive dispositions. Participants completed the PSE on the computer and received the standard instructions for the procedure as described by Smith (1992). They were asked to write four imaginative stories based on picture cues, which included (a) a ship's captain talking with another man, (b) a man sitting at a desk, (c) two female scientists in a laboratory, and (d) a man and a woman on a trapeze. These pictures are commonly used in research dealing with implicit motives (Schultheiss & Brunstein, 2001; Smith, 1992). The four picture cues were presented in randomized order, in the middle of the screen. Each picture was accompanied by a short instruction saying, "Look at the picture—The program will automatically turn to the next page within 20 seconds." On the next page, a text field was presented with six reminders about what to include in the story (e.g., "What is happening?" "Who are the people?"). Participants had 5 min to write a story before the program led them to the next picture. The content of each story was coded according to Winter's (1994) manual for scoring motive imagery in running text. Power is scored for content indicating impact or influence on other persons or groups, for example, by strong, forceful actions or eliciting strong emotions in others. Affiliation intimacy is coded when a sentence contains the establishment, maintenance, or restoration of friendly relations among persons including a warm and friendly quality to the relationship, for example, indicated by expressions of love or friendship. Each story was coded by two coders who reached an overall agreement of Cohen's Kappa of .85. Scoring disagreements were discussed in full. Participants' motive scores for affiliation (M = 2.60, SD = 2.23) and power (M = 3.86, SD = 2.68) correlated with protocol length (M = 546 words, SD = 188), ps < .01. In accordance to Smith, Feld, and Franz's (1992) procedure, we corrected the raw scores for protocol length by regression and converted them to z scores.

Affective experience. We measured the experience of motive-congruent affect within the relationship by asking participants, "When you are together with [name of the partner] how often do you feel . . . " followed by a randomized list of various emotions. For each emotion, participants rated the frequency of experience on a fully labeled scale from 1 (*never*) to 7 (*always*). The list included three affiliation-specific emotions (*calm, relaxed*, and *peaceful*; Cronbach's $\alpha = .78, M = 5.47, SD = 0.84$) and three power-specific emotions (*strong, excited*, and *enthusiastic*; Cronbach's α = .88, M = 5.44, SD = 0.82). Besides these motive-specific positive emotions, the list included five negative filler items (i.e., *sad, dejected, bored, distressed, angry*), which were not included in the analysis. We then submitted the six motive-specific emotions to a principal components analysis with varimax rotation to see whether our classification of low- and high-arousal positive affect items is justified. Two factors with eigenvalues greater than 1 (eigenvalues = 3.43 and 1.03) accounted for 74.37% of the variance. The three affiliation-specific emotions loaded most highly on Factor 1 (loadings > .82). The three power-specific emotions loaded most highly on Factor 2 (loadings > .60). The means of the two subscales for affiliation- and power-specific affect were highly correlated (r = .60, p < .01), which may reflect participants' response tendencies and an underlying positive-emotion factor. Therefore, we partialed out individual response tendencies for positive emotions by centering participants' ratings around their own mean across all positive emotions by subtracting the individual mean from each item rating before we averaged them (e.g., Schwartz, 1992).

Relationship satisfaction. Our relationship satisfaction scale consisted of five items adopted from Hendrick's (1988) Relationship Assessment Scale, that is, "How committed are you to your relationship?" "How much do you love your partner?" "How well does your partner meet your needs?" "To what extent has your relationship met your original expectations?" "How good is your relationship compared to most?" Each item was answered on a fully labeled 7-point scale ranging from 1 (*not at all*) to 7 (*extremely*).

Table 1. Descriptive Statistics and Two-Tailed Correlations (Study 1)

Variable	2	3	4	5	6	7	8	9	10	*M*	*SD*
1. Relationship satisfaction	−.13	.04	.47****	.39****	.11	−.04	−.47****	.05	−.01	5.94	0.85
2. Power motive[a]		.03	−.10	−.14	.02	−.07	.27**	.00	−.13	3.86	2.68
3. Affiliation motive[a]			−.03	−.30****	.20	−.35****	−.11	−.11	−.28**	2.60	2.22
4. Power-specific affect				.60****	.50****	−.23**	−.11	−.17	−.23**	5.47	0.84
5. Affiliation-specific affect					−.32****	.43****	.04	−.17	−.06	5.45	0.82
6. Power-specific affect (mc)						−.42****	−.10	.07	−.12	0.10	0.46
7. Affiliation-specific affect (mc)							.20	.10	.23**	0.12	0.40
8. Quality of alternatives								−.00	.12	3.33	1.27
9. Relationship duration (months)									.60****	43.31	55.09
10. Age										27.50	10.85

Note: mc = mean centered. $N = 78$.
[a]Correlations are computed with motive scores corrected for protocol length; means and standard deviations refer to raw motive scores.
**$p < .05$. ****$p < .001$.

The scale showed high reliability (Cronbach's α = .82, M = 5.94, SD = 0.85).

Control variables. Because of the relatively high heterogeneity in age and relationship duration in the sample, we included these two variables as control variables in the main analyses.

According to the investment model, a high level of dependence on a relationship, stemming from such things as poor quality of alternatives, is highly related to relationship commitment (Rusbult, Drigotas, & Verette, 1994). Therefore, we assessed quality of alternatives to the present relationship with the five-item subscale of the Investment Model Scale (Rusbult, Martz, & Agnew, 1998). Participants reported their degree of agreement using 9-point Likert-type scales (1 = *agree not at all*; 9 = *agree completely*) with items such as "My needs for intimacy, companionship, etc., could easily be fulfilled in an alternative relationship." The scale was sufficiently reliable (Cronbach's α = .79, M = 3.32, SD = 1.27).

Results and Discussion

Preliminary Analyses and Correlations. Study 1 replicates the previously reported gender difference in the affiliation motive, showing that women scored significantly higher, $t(75) = -2.16$, $p < .05$ (see Schultheiss & Brunstein, 2001). There were no gender differences in motive-specific affect nor in relationship satisfaction, $t(75) < 1$. Controlling for gender did not substantially alter any of the reported findings.

Relationship satisfaction was not correlated with the two mean-centered scales for power-specific and affiliation-specific affect (see Table 1). Quality of alternatives to the relationship was negatively correlated with relationship satisfaction, which replicates previous research (Rusbult et al., 1998). Although the power motive did not correlate with any emotion variable, there was a negative correlation between the affiliation motive and the experience of affiliation-specific affect. The higher participants' affiliation motive was, the less they reported experiencing low-arousal positive affect.[1] Note that this is distinct from our hypothesis that those high in the affiliation motive would report greater relationship satisfaction the more they did experience low-arousal positive affect (e.g., calmness) in their relationship.

Predicting Relationship Satisfaction From the Motive–Affect Interaction. Following our assumption that people should be more satisfied with their relationship the more they experience affect that satisfies their implicit motives, we expected to find interactions specifically between the power motive and power-specific affect and the affiliation motive and affiliation-specific affect. To test this hypothesis, we conducted a hierarchical regression analysis of relationship satisfaction (see Table 2). After the control variables (quality of alternatives, relationship duration, and age) in the first block, we entered the power and affiliation motive and the two mean-centered scales for motive-specific affect in the second block. The interaction terms between motives and their specific affect followed in the third block. Finally, the fourth block contained the interaction terms between motives and the opposite, nonmatching affect (Power motive × Affiliation-specific affect, Affiliation motive × Power-specific affect). The results revealed the predicted pattern. The third block containing the interactions between motives and their motive-specific affect was significant, $\Delta R^2 = .08$, $\Delta F(2, 68) = 4.14$, $p = .02$, with a marginally significant interaction between the power motive and power-specific affect, β = .23, $t(68) = 1.84$, $p = .07$, and a significant interaction between the affiliation motive and affiliation-specific affect, β = .23, $t(68) = 2.14$, $p = .04$. Importantly, there was no effect of interactions between motives and nonmatching affective states, $\Delta R^2 = .01$, $\Delta F(2, 66) = 0.47$.

To graph the predicted interactions, we computed scores of relationship satisfaction for predictor values of one standard deviation above and below the mean for the two motives separately (see Figure 1). Participants high in the affiliation

Table 2. Hierarchical Regression of Relationship Satisfaction (Study 1)

Block	Variable	ΔR^2	*df*	ΔF	*b*[a]
1	Control variables	.22	3, 74	7.07***	
2	Motives and emotions	.01	4, 70	0.29	
3	Matching interactions	.08	2, 68	4.14**	
	*n*Pow × Power-specific affect				.23*
	*n*Aff × Affiliation-specific affect				.23**
4	Nonmatching interactions	.01	2, 66	0.47	
	*n*Pow × Affiliation-specific affect				−.03
	*n*Aff × Power-specific affect				−.11
	Cumulative R^2	.33	11, 66	2.93**	

Note: *n*Pow = power motive; *n*Aff = affiliation motive.
[a]*b* is the standardized regression coefficient at point of entry.
*p < .10. **p < .05. ***p < .01.

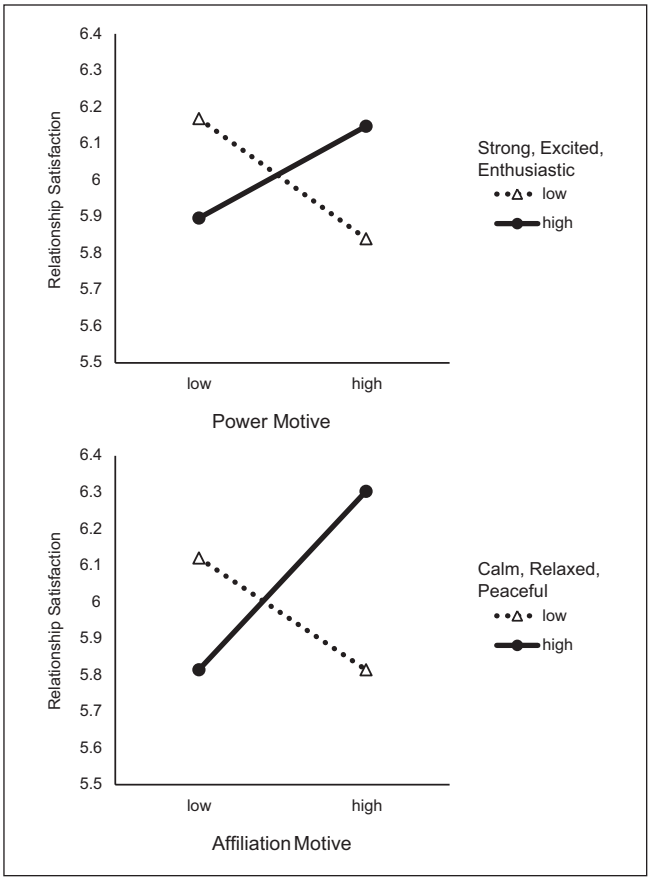

Figure 1. Relationship satisfaction as a function of high or low affiliation and power motives in interaction with low- and high-arousal positive affect in Study 1
Note: The values for all variables correspond to one standard deviation below and above the mean, respectively.

motive tended to be most satisfied in their relationship when they frequently experienced affiliation-specific affect (feeling calm, relaxed, and peaceful). Simple slope analysis confirms that for participants with a high affiliation motive, relationship satisfaction was marginally positively related to the frequency of feeling calm, relaxed, and peaceful, $t(74) = 1.80$, $p = .08$, partial $r = .20$. For participants with a high power motive, the experience of power-specific affect (feeling strong, excited, and enthusiastic) was positively related to relationship satisfaction, but the slope was nonsignificant, $t(74) = 1.03$, $p = .31$.

The findings of Study 1 show, in the context of romantic relationships, that regardless of the motive, satisfaction is tied to the experience of motive-congruent affect. The power motive interacted (only) with power-specific affect (high-arousal positive affect) and the affiliation motive (only) with affiliation-specific affect (low-arousal positive affect). This means that people with a high affiliation motive had a tendency to be more satisfied when they frequently felt calm, relaxed, and peaceful in their relationship, and that for power-motivated people, relationship satisfaction was to some degree tied to the frequency of feeling strong and excited in the relationship.

The findings provide the first support for our assumptions that the experience of motive-specific emotions is an important component of motive satisfaction and of satisfaction in a specific domain. It begins to suggest that if a person can experience the preferred affect of his or her motive disposition—in any domain—that person can feel happier and more satisfied. However, although motives and motive-specific affect interacted as predicted, the simple slopes showed that the relationships were not as strong as expected (marginally significant for affiliation and not significant for power). One explanation could be that asking participants about their experience of affective states in their relationship with a list of various positive and negative affect items did not produce a fully valid measure of the frequency of the targeted motive-specific affect. As reported above, all positive items were highly correlated indicating an underlying positivity bias. Reading all the emotions could have contaminated the proper rating of the individual items. One aim of

Study 2 was to account for this possibility. Participants were instructed to think of only one of the two motive-specific affective states. Therefore, we expected the predicted interaction and patterns of results to be stronger in Study 2.

Study 2

Thus far, we have found some support for our hypotheses in a correlational study, which does not allow us to draw conclusions about causality. Perhaps it is not the frequency or salience of motive-congruent affect that makes people happy in their relationships. Perhaps people with a strong affiliation motive who are already happy in their relationship simply rate the motive-congruent affect as more frequent. Therefore, we wanted to see whether the same interactive effect of implicit motive and affective experience on relationship satisfaction would occur when we manipulated the people's affective "experience" by making specific emotional experiences salient. If so, we should be able to find short-term boosts in relationship satisfaction after a motive-congruent affective "experience."

To test this assumption, we borrowed a manipulation from a study on the effects of autobiographical memory on intimacy (Alea & Bluck, 2007), in which participants remembered events with their partner. Specifically, we manipulated the "experience" of motive-specific emotions by asking our participants to think of a situation with their partner where they felt in a specific way (either calm/relaxed or strong/excited), and then assessed the extent to which the experience of motive-congruent affect led to greater relationship satisfaction. We hypothesized that intimacy would increase as a joint function of the affect "experienced" in the situation (affiliation or power-specific affect) and participants implicit motives.

Method

Participants. Participants were registered members of a U.S. nationwide online pool, and those who were currently in a committed relationship for at least 6 months were invited to take part in a 60-min online study on "relationships, leisure, and work" that consisted of two sessions, 1 week apart. As compensation, they received a US$15 gift card. Of the 111 who met the relationship criterion, 9 dropped out during the first session, 11 were excluded because at least one of their PSE stories was too short to allow proper computation of implicit motives, and 1 was excluded because he was a distinct outliner on the implicit affiliation motive (more than 3 *SD* above the mean). Of the remaining 90 participants, 81 (54 woman and 27 men) started and completed the second session of the study. Their average age was 36.03 (*SD* = 10.87), ranging from 21 to 72. Mean relationship duration was 8.67 years (*SD* = 6.45 years), ranging from 6 months to 35 years.

Procedure. After following the link to the study, participants provided informed consent and verification of age. The first session contained some demographic questions and the PSE assessment of implicit motives. Then participants provided their email address so they could be invited to the second session 1 week later.

The second session began with the experimental manipulation in the form of a recall task. Participants were randomly assigned to either the strong/excited or calm/relaxed memory condition. In both conditions, they were asked to think of a situation they were in with their partner, preferably during the previous 4 weeks. In the strong/excited condition, they were told,

> It should be a situation where the two of you were engaged in an activity that let you feel strong and excited. For example, you were engaged in a high intensity discussion, or some other high intensity activity (e.g., climbing a mountain, doing sports together).

In contrast, in the calm/relaxed condition, they were told,

> It should be a situation where the two of you were engaged in an activity that let you feel calm and relaxed. For example you spent a calm evening together watching TV, reading, or otherwise relaxing.

Participants were then instructed to put themselves back in the situation and to remember where they were, what they did, and what they were thinking and feeling. As soon as they had a clear picture of that memory, they continued to the next page where they were asked to describe their memory in detail for 5 min. Next, all participants filled in a questionnaire containing the manipulation check, some memory-related questions, and the measure of relationship satisfaction.

Measures

Implicit motive assessment. An online PSE (Bernecker & Job, 2011) was administered to measure participants' implicit motive dispositions. We used the same pictures and (standard) instructions described in Study 1. After seeing each picture for 20 s, participants had 5 min to type their story into a field presented on the upcoming web page. Unlike the procedure in Study 1, to reduce the drop-out rate, participants were allowed to proceed to the next picture whenever they were ready regardless of whether full response time had elapsed. The content of each story was coded by one coder according to Winter's (1994) manual for scoring motive imagery in running text. The coder had previously reached 85% interrater agreement on calibration materials.

Participants' motive scores for affiliation ($M = 2.05$, $SD = 1.84$) and power ($M = 2.88$, $SD = 2.79$) correlated with protocol length ($M = 407$ words, $SD = 236$), $ps < .01$; hence, we corrected the raw scores for protocol length by regression.

Relationship satisfaction. This time, we used a self-report measure of intimacy, to assess postmemory relationship satisfaction, our dependent variable. Research has shown that this measure is sensitive to short-term changes in levels of intimacy (e.g., as a function of recent conflict) and that it is still positively related to satisfaction on a global level (Cordova, Gee, & Warren, 2005; Laurenceau, Barrett, & Rovine, 2005). Therefore intimacy seemed a good measure of relationship satisfaction to capture subtle changes in relationship satisfaction as a function of the manipulation. Hence, we used 12 items representing two subscales from the PAIR (personal assessment of intimacy in relationships) inventory (Schaefer & Olson, 1981). Six of them assessed the quality of connection to a partner emotionally (e.g., "I often feel distant from my partner"), and 6 items assessed the quality of connection to a partner intellectually (e.g., "We have an endless number of things to talk about"). The items were rated on a 7-point scale from 1 (*not at all true of my partner*) to 7 (*very true of my partner*). A principal components analysis showed that all 12 items loaded onto a single factor (eigenvalue = 7.28) accounting for 60.65% of the variance. Therefore, we combined all items into one measure of intimacy (see Laurenceau et al., 2005, for similar procedure). The scale was highly reliable, Cronbach's $\alpha = .85$.

Manipulation check. Directly after the memory task, participants answered two manipulation check questions asking, "How calm and relaxed did you feel in this situation?" and "How strong and excited did you feel in this situation?" on a 6-point scale ranging from 1 (*not at all*) to 6 (*extremely*).

Control variables. There are several variables that might confound the effect of the experimental manipulation on relationship satisfaction. Situations where participants felt either calm/relaxed or strong/excited can vary in the frequency with which such situations occur in participants' everyday life. Therefore, we asked participants how often they experience similar situations with their partner. They answered on a fully labeled 6-point scale ranging from *never* to *daily*. Next, we asked them how difficult it was to think of a situation with their partner in which they felt calm/relaxed or strong/excited, respectively (1 = *not at all*, 6 = *extremely*).

Because participants completed the whole experimental session online, it might be of importance for the effect of the experimental manipulation whether participants were alone or whether there were other people present during the session. For example, previous research showed that implicit motives can differ depending on whether people are alone or in company while writing PSE stories (Schultheiss & Brunstein, 2001). Therefore, we asked participants to choose between the options "I am alone at this place" versus "There are other people around me at this place." All participants were asked not to interact with anybody while completing the study.

Results and Discussion

Manipulation Check and Preliminary Analyses. Table 3 reports the means, standard deviations, and zero-order correlations of the main variables. The two experimental conditions were compared on the two manipulation check items. Participants felt significantly more strong/excited in the strong/excited condition ($M = 4.84$, $SD = 1.15$) than in the calm/relaxed condition ($M = 4.00$, $SD = 1.54$), $t(79) = -2.79$, $p < .01$, and they were more calm/relaxed in the calm/relaxed condition ($M = 5.34$, $SD = 1.07$) than in the strong/excited condition ($M = 3.98$, $SD = 1.61$), $t(79) = 4.43$, $p < .01$. Next, we looked whether implicit motives determined how calm/relaxed or strong/excited participants felt in the two conditions and whether motives interacted with the experimental condition on the two manipulation check items. For that purpose, hierarchical regression analyses were conducted with the affiliation motive, the power motive, and the experimental condition (0 = *strong/excited*, 1 = *calm/relaxed*) in the first block, followed by the two Motive × Experimental condition interaction terms in the second block. There was only a significant main effect for the experimental condition, and not for the motives: on the calm/relaxed item, $\beta = .46$, $t(77) = 4.52$, $p < .01$, as well as on the strong/excited item, $\beta = -.29$, $t(77) = -2.78$, $p < .01$. There was no interaction between experimental condition and either of the motives on either of the two items. This result confirms that the manipulation worked and shows that motives did not affect the emotions that were experienced in the two conditions.

The same regression analysis was conducted on frequency of similar situations, revealing a main effect for experimental condition, $\beta = .43$, $t(77) = 4.14$, $p < .01$. Calm/relaxed situations were experienced more frequently ($M = 4.37$, $SD = 1.42$) than strong/excited situations ($M = 2.98$, $SD = 1.55$). Similarly, the analyses for difficulty of thinking about a situation revealed a main effect of condition, $\beta = -.33$, $t(77) = -3.09$, $p < .01$. It was easier to think of a calm/relaxed situation ($M = 1.58$, $SD = 1.08$) than a strong/excited situation ($M = 2.58$, $SD = 1.65$). Therefore, we controlled for situation frequency and difficulty of retrieval when we tested the hypothesis. Neither the motives nor their interaction with the experimental condition had a significant effect on these two variables.

Of all participants, 18% indicated that there were other people around when they completed the experimental session online. A chi-square test indicated that these participants were equally distributed over the two conditions, $\chi^2(1) = .00$. Still, we included this variable as a control variable in the further analyses because it might affect the impact of our experimental manipulation.

Table 3. Descriptive Statistics and Two-Tailed Correlations (Study 2)

Variable	2	3	4	5	6	7	8	*M*	*SD*
1. Relationship satisfaction	.02	−.01	−.47****	.11	−.09	−.12	−.17	4.72	0.78
2. Power motive[a]		−.04	−.04	.06	−.09	−.01	.08	2.88	2.79
3. Affiliation motive[a]			.12	.08	−.02	.02	−.10	2.02	1.84
4. Difficulty of retrieval				.60****	.50****	.06	.25**	2.11	1.49
5. Situation frequency					.27**	.10	−.26**	3.63	1.64
6. Privacy[b]						.14	−.06	—	—
7. Relationship duration (months)							.61****	104.04	77.40
8. Age								36.03	10.87

Note: $N = 81$.
[a]Correlations are computed with motive scores corrected for protocol length; means and standard refer to raw motive scores.
[b]0 = *I am alone at this place*; 1 = *There are other people around me at this place.*
**$p < .05$. ****$p < .001$.

Table 4. Hierarchical Regression of Relationship Satisfaction (Study 2)

Block	Variable	ΔR^2	*df*	ΔF	*b*[a]
1	Control variables	.23	5, 75	4.53***	
2	First-order terms	.01	3, 72	0.26	
	*n*Pow				−.00
	*n*Aff				.04
	Exp. Condition				−.10
3	Multiplicative interaction terms	.10	2, 70	5.27	
	*n*Pow × Experimental condition				−.30**
	*n*Aff × Experimental condition				.38**
	Cumulative R^2	.34	10, 80	3.60***	

Note: *n*Pow = power motive; *n*Aff = affiliation motive.
[a]*b* is the standardized regression coefficient at point of entry.
**$p < .05$. ***$p < .01$.

Women and men did not differ in the affiliation or power motives or in relationship satisfaction, and controlling for gender did not alter any of the reported results.

Predicting Relationship Satisfaction From the Motive–Emotion Interaction. A hierarchical regression analysis of relationship satisfaction was conducted (see Table 4) with situation frequency, difficulty of retrieval, and privacy of experimental session as control variables in the first block. As in Study 1, relationship duration and age were also included as control variables in this block.[2] Experimental condition (0 = *strong/excited*, 1 = *calm/relaxed*), the affiliation motive, and the power motive were entered in the second block, followed by the two interaction terms between motives and experimental condition in the third block. The first block was significant, $\Delta R^2 = .24$, $\Delta F(5,75) = 4.62$, $p < .01$, while the second block was not significant, $\Delta R^2 = .01$, $\Delta F(3,72) = 0.33$. Importantly, the third block with the two Motive × Emotion-condition interactions was highly significant, $\Delta R^2 = .09$, $\Delta F(2,70) = 4.97$, $p < .01$. The Power motive × Emotion-condition interaction, $\beta = -.30$, $t(70) = -2.09$, $p < .05$, as well as the Affiliation motive × Emotion-condition interaction, $\beta = .38$, $t(70) = 2.23$, $p < .05$, were significant.

Figure 2 shows that the effect of the experimental condition on relationship satisfaction varied as a function of power and affiliation motives in the predicted directions. Simple slope analyses with each motive separately showed that, as predicted, participants high in the power motive were more satisfied with their relationship when they thought of a situation where they felt strong/excited than when they thought of a situation where they felt calm/relaxed with their partner, $t(77) = 2.25$, $p < .05$, partial $r = .25$. Also as predicted, for participants low in the power motive, the difference between conditions was not significant, $t(77) = -1.15$, $p = .25$, partial $r = .13$, and in fact was in the opposite direction. For the affiliation motive, the analogous pattern of results was obtained. Participants high in the affiliation motive were more satisfied with their relationship when they thought of a situation where they felt calm/relaxed than when they thought of a situation where they felt strong/excited with their partner, $t(77) = -2.24$, $p < .05$, partial $r = .25$. For participants low in the affiliation motive, the difference between experimental conditions was not significant, $t(77) = 1.14$, $p = .26$, partial $r = .13$ (and again was in the opposite direction).

Study 2 replicated the findings from Study 1 with an experimental design. How satisfied participants felt after

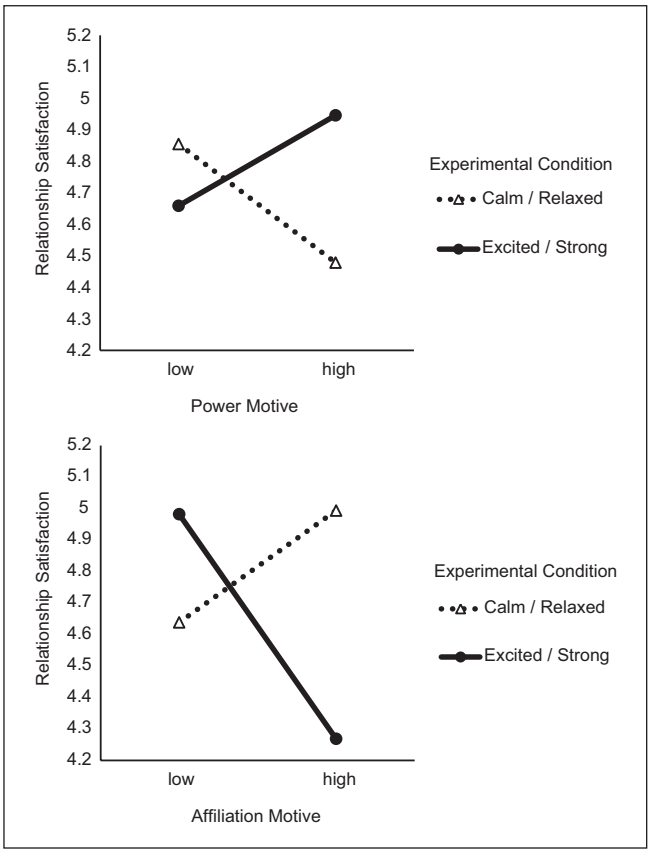

Figure 2. Postmemory relationship satisfaction as a function of high or low affiliation and power motives and experimental condition in Study 2

Motive values correspond to one standard deviation below and above the mean, respectively.

thinking of a situation in their relationship in which they experienced either power or affiliation-specific affect significantly depended on their implicit power and affiliation motives, respectively. Participants reported more relationship satisfaction when they were led to think of a situation from their past in which they experienced affect that satisfied their motive dispositions. Although implicit motives did not determine the intensity of experienced emotions as measured by the manipulation check items, participants who thought about a situation in which they experienced positive affect that did not satisfy their implicit motives felt significantly less satisfied with their relationship than participants who were led to think of a situation in which they experienced positive affect that satisfied their implicit motives.

These findings confirm that it is the experience of motive-specific affect, one that satisfies an implicit motive disposition that leads to enhanced satisfaction in a particular context, whether or not that context is "matched" to the motive's typical domain.

Additional Analysis on Content of the Memories. In the present study, we did not control for the situations that elicited the affective experiences, because we asked participants to freely recall situations with the partner. Hence, it could be that calm/relaxed situations were typically situations with affiliation or intimacy content and strong/excited situations typically contained some sort of power experience. Therefore, we took a closer look at the content of the memories. Like the PSE stories in both studies, the content of each memory was coded according to Winter's (1994) manual for scoring motive imagery in running text by one of the trained coders. Indeed in the calm/relaxed condition, the vast majority of memories (83%) contained affiliation content. Typically, participants wrote about a quiet evening in front of the television with a relaxed conversation. Only 3% of the memories in this condition could be coded for power. However, this is not surprising, because we asked people to recall a calm and relaxed time with their partner, which may yield the prototypical affiliation content. More revealing are the memories in the strong/excited condition. Only 24% of the memories in this condition contained any sort of power content (e.g., competing with the partner in a game or making the partner laugh). In the majority of the memories, people felt strong/excited for different reasons (e.g., beauty of nature, workout, or a roller coaster ride). Hence, our participants generated situations where they felt strong/excited with their partner without the direct experience of having an impact. Still, participants with a high power motive felt more satisfied with their relationships thinking of these situations. Importantly, excluding participants who generated power-content memories from the analysis did not alter the pattern of results (it only reduced the statistical power). This means that the power-content memories did not account for our findings. Participants with a high power motive felt more satisfied with their relationship thinking of a strong/excited situation even if this situation did not contain an experience of impact.

General Discussion

The present research was conducted to test the hypothesis that the core of implicit motives is the desire for particular affective experiences and that people are more satisfied the more they experience affect that satisfies their implicit motive disposition, regardless of whether the domain is typically seen as aligned with the motive. Using relationships as a testing ground for this hypothesis, we found in a cross-sectional study that implicit motives for power and affiliation interacted with motive-specific affect in predicting relationship satisfaction. Whether people's affiliation motive predicted relationship satisfaction depended on the experience of affiliation-specific affect (calm, relaxed, peaceful) and not the experience of power-specific affect (strong, excited, enthusiastic). Similarly, whether people's power motive predicted relationship satisfaction depended on the experience of power-specific and not affiliation-specific affect. Experimental Study 2 further showed that people with a high power motive reported higher relationship satisfaction

when they were led to think of a situation where they felt strong and excited with their partner as opposed to a situation in which they felt calm and relaxed. Similarly, participants with a high affiliation motive reported higher relationship satisfaction when they were led to think of a situation where they felt calm and relaxed with their partner. Overall, we found that when there was a fit between a person's motive and motive-specific affect, people were more satisfied in their relationships.

Our research supports the assumption that implicit motives can be satisfied in contexts that are not usually seen as genuinely fitting these motives, although this does not imply that motive-fitting contexts do not exist. Study 2 showed that calm/relaxed situations are more frequent in relationships than strong/excited situations. Hence, there seem to be contexts that more readily afford high-density experiences of a particular motive-related affect. For example, certain kinds of work may provide more opportunities to have strong/excited experiences than calm/relaxed experiences. However, our studies support the idea that it is the experience of these motive-specific affective states, rather than the domain in which they are experienced, that leads to satisfaction.

Implications

With the present research, we put forth the idea of motive-specific affective states as basic incentives for implicit motives. The assumption that each motive aims at the experience of a distinct specific affect goes back to McClelland (1985), who introduced links between the "big three" motives (affiliation, power, and achievement) and basic emotions but did not subject his hypothesis to empirical testing. Research on implicit motives has largely neglected this idea about motive-specific affective experiences as core incentives for the implicit motive system. Although it is accepted as a common principle that implicit motives are dispositions "to seek out certain incentives for the affective changes they elicit" (Schultheiss & Brunstein, 2010, p. xviii), these affective changes are often considered to be simply rewarding and pleasurable, but not motive specific. With the present studies, we were able to show that the implicit power and affiliation motives are indeed related to specific affective states. Positive high-arousal affect (feeling strong and excited) leads to relationship satisfaction for people with a high power motive, and positive low-arousal affect (feeling calm and relaxed) leads to relationship satisfaction for people with a high affiliation motive. This evidence suggests that indeed an inherent aspect of implicit motives may be the desire for specific affective experiences.

One could argue, however, that the experience of specific affect is just a consequence of a motive-satisfying situation (i.e., strength as a consequence of the experience of impact). In the present studies, we did not control for the situations that elicited the affective experiences, because we asked participants to freely recall situations with the partner. However, content coding of memories in Study 2 showed that although most memories in the calm/relaxed condition indeed contained affiliation content, most of the memories in the strong/excited condition did not contain power content. Importantly, excluding participants who generated power-content memories from the analysis did not alter the results. Hence, participants with a high power motive felt more satisfied with their relationship after remembering a strong/excited situation even if this situation did not contain an experience of impact.

An advantage of conceptualizing implicit motives as involving the need for specific affective experience is that affective states (and desired affective states) are potentially accessible to people's conscious experience and thus can become aligned with their conscious goal striving. Incongruence between implicit (unconscious) motives and peoples' conscious goals or actions is a negative predictor of subjective well-being and health (e.g., Baumann et al., 2005; Brunstein et al., 1998). However, if people are able to understand the affective states that give them the most satisfaction, they can then figure out which situations create that satisfaction or how better to create those experiences in the situations they frequently encounter. In a series of experimental studies, Job and Brandstätter (2009) showed that focusing on motive-specific affect during goal imagery led participants to select goals that were in line with their implicit motives. That is, thinking about the possibility of experiencing motive-specific affect made participants choose courses of action that were in line with their implicit motives. Future research should investigate whether people are able to report which affective states they experience as satisfying and whether this could serve as a basis for adopting goals that are more congruent with implicit motives.

Furthermore, this research contributes to the literature on the role of affective states in romantic relationships. Previous research has chiefly emphasized the role of high-arousal positive affect, such as excitement as opposed to boredom, as contributing to high relationship satisfaction, and has thus encouraged couples to engage in novel arousing activities (Aron et al., 2000; Reissman et al., 1993). With the present research, we show that it might be worth considering individual differences in implicit motive dispositions in this context. Although it can be a good advice to engage in arousing activities for people with a high power motive, people with a high affiliation motive might profit more from relaxing activities with their partner.

Limitations and Future Directions

Previous research suggests that people tend to recall significant life events that are consistent in content with their implicit motives (McAdams, 1982; McAdams, Hoffman, Mansfield, & Day, 1996; Woike, Gershkovich, Piorkowski, & Polo, 1999). According to this research, one might be concerned that our manipulation in Study 2 was affected by the accessibility of the event, such that when affiliation-motivated people were asked to recall a time when they felt strong and

excited with their partner, they had to try harder to remember than power-motivated people, which could have negatively biased their satisfaction ratings. Our data from Study 2 do not support this alternative explanation. We did not find an effect of implicit motives on the reported difficulty of retrieval or on the intensity of experienced affect expressed in the two manipulation check items. Still, future research should further investigate how specific affect interacts with implicit motives in predicting relationships satisfaction by the mean of laboratory experiments in which affective experiences are directly manipulated (see Aron et al., 2000).

In such future experiments, it would be advisable to include a neutral control condition that did not trigger specific affect. This would allow more precision in the interpretation of the result patterns. At the present, we can only compare the two motive-specific emotions conditions and conclude that motive-congruent emotions have a positive effect when compared with motive-incongruent emotions. We do not know how satisfied participants are compared with a neutral baseline.

Furthermore, as suggested above, it would be interesting to test our predictions in other fields than romantic relationships. For instance, we should also find people with a high affiliation motive to be more satisfied at work if they worked under calm and relaxed as opposed to exciting or stressful conditions.

Conclusion

The present research suggests that the core incentives of implicit motives are specific affective experiences. To feel happy or satisfied, people with a high power motive appear to need different affect than do people with a high affiliation motive. With these findings, we highlight, as McClelland himself highlighted, the role of affective experience as a basic component of the implicit motive system (McClelland, 1985; Weinberger & McClelland, 1990). Positive affective states are not just a consequence of motive satisfaction but rather may represent the basic satisfying goal-state of implicit motivation.

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Notes

1. We did not have any hypothesis about the correlation between motive disposition and emotions actually experienced in the relationship. But previous research showed that although Asian and American cultures prefer different positive affect, they do not report different degrees (Tsai, 2007). Still, the negative correlation between the affiliation motive and affiliation-specific emotions in this study is surprising. With respect to the main results of this research, this negative correlation can indicate a trend for overall dissatisfaction of the affiliation motive in this sample. This might also explain why the affiliation motive was not positively correlated with relationship satisfaction as it was found in previous research (McAdams & Vaillant, 1982).
2. Privacy of experimental session slightly acts as a suppressor variable for the Power motive × Experimental condition interaction. It is marginally correlated with the interaction term ($r = -.19$, $p = .09$), and if it is excluded from analyses, the effect of the interaction is slightly diminished, $\beta = -.26$, $t(71) = -1.86$, $p = .067$. Hence, by controlling for privacy, we could filter some noise caused by a random disproportion in the assignment of power-motivated participants who were alone versus not alone to the experimental conditions.

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