

(In)Congruence of Implicit and Explicit Communal Motives Predicts the Quality and Stability of Couple Relationships

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Abstract

Objective: Previous research has shown that motive congruence, as observed in convergingly high or low scores on implicit and explicit motive measures, promotes well-being and health. Extending this individual perspective to the realm of couple relationships, the present investigation examined intra- and interpersonal effects of communal motive (in)congruence on relationship satisfaction and stability.

Method: The implicit partner-related need for communion, the explicit desire for closeness, and relationship satisfaction were assessed in a sample of 547 heterosexual couples aged 18 to 73 years. In a one-year follow-up study, information on relationship stability was obtained, and relationship satisfaction was reassessed. The researchers tested cross-sectional and longitudinal effects of motive (in)congruence by dyadic moderation analyses.

Results: Individuals scoring congruently high on both motives reported the highest relationship satisfaction in concurrence with motive assessment and 1 year later. In addition, motive incongruence predicted an increased risk of relationship breakup over 1 year.

Conclusions: The results highlight the significance of both implicit and explicit motives for couple relationships. Motive incongruence was confirmed as a dispositional risk factor that so far has not been considered in couple research. Future research directions addressing potential mediators of the observed effects and potential moderators of motive (in)congruence are discussed.

Keywords: social motivation, implicit motives, motive congruence, communion, couple relationships

Feeling close to each other is an important prerequisite for the satisfaction and happiness of romantic relationship partners (Aron, 2000; Ben-Ari & Lavee, 2007; Hendrick & Hendrick, 1992). Hence, the partners' motivational dispositions to seek intimacy and communion are supposed to play an important role in the dyadic interplay of relationship regulation that finally leads to good or poor relationship quality and adjustment (e.g., Cantor & Malley, 1991; Read & Miller, 1989). Motivational needs and goals not only function as driving forces that energize strivings for closeness, but also determine an individual's capacity to draw joy and reward from experiences of dyadic closeness and communion (Laurenceau, Troy, & Carver, 2005; McAdams, 1992; McClelland, 1985).

Two kinds of communal motive dispositions have to be distinguished: explicit motives and goals, which guide an individual's conscious and deliberate strivings, and implicit motives, of which the individual is not fully aware, but

which nevertheless affect behavior and subjective experience (McClelland, Koestner, & Weinberger, 1989). Previous studies have shown that both kinds of motives are associated with relationship quality. In the realm of implicit motives, research has identified positive concurrent (Hagemeyer & Neyer, 2012) and long-term effects (McAdams & Vaillant, 1982) on relationship quality. Regarding explicit communal motives and goals, positive relations with diverse aspects of relationship quality such as general and sexual satisfaction have been

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confirmed in numerous studies (e.g., Hagemeyer, Neyer, Neberich, & Asendorpf, in press; Impett, Strachman, Finkel, & Gable, 2008; Laurenceau, Kleinman, Kaczynski, & Carver, 2010; Sanderson & Cantor, 1997, 2001). However, no prior studies have examined the joint and interactional effects of implicit and explicit needs for communion and closeness on the quality and stability of couple relationships, which are the subject of the present investigation.

Implicit and Explicit Motive Systems

According to dual-motives theory, implicit and explicit motives pertain to distinct motivational systems (Brunstein, 2008; McClelland et al., 1989). Implicit motives are not fully accessible to conscious reflection and cannot be measured via self-report questionnaires. They are assessed indirectly, usually through content analyses of operant thought samples like fantasy stories generated in response to ambiguous picture cues, as introduced by Morgan and Murray's Thematic Apperception Test (TAT; 1935). Implicit motives reflect an individual's hedonic orientation towards specific incentives (and disincentives); that is, they determine which stimuli are experienced as pleasurable (or threatening) and how much of a specific class of experiences an individual needs to feel satisfied. The implicit motivational system is thus supposed to energize and direct operant (or spontaneous) and affectively driven behavior (McClelland, 1985; Schultheiss & Brunstein, 1999).

In contrast, explicit motives and goals, as assessed by self-reports, pertain to an individual's cognitively elaborated self-image. They reflect conscious adaptations to the challenges and opportunities presented by an individual's social environment (Schultheiss & Brunstein, 1999). Thus, explicit motives are supposed to direct respondent (or controlled) behavior and deliberate choices in highly structured situations (McClelland, 1980; McClelland et al., 1989), thereby providing individuals with a sense of meaning and purpose in their lives rather than with affectively based hedonic experiences (Cantor & Malley, 1991).

This dual-motives approach in many ways resembles dual-process theories that have become prominent in other areas of personality and social psychology (e.g., Epstein, 1994; Strack & Deutsch, 2004). These approaches concur in the basic distinction of two largely independent information processing systems: an implicit system guiding spontaneous and affectively toned behavior and an explicit system guiding deliberate and reflected behavior. This distinction has been supported by numerous studies that found only small overlap between explicit and implicit dispositions in the realm of social cognition (Hofmann, Gawronski, Gschwendner, Le, & Schmitt, 2005; Schnabel, Asendorpf, & Greenwald, 2008) and in motive research (Biernat, 1989; King, 1995; Schultheiss, Yankova, Dirilikvo, & Schad, 2009; Spangler, 1992). According to these findings, intrapersonal constellations of implicit and explicit motive dispositions should vary freely

across individuals. This raises the question of how different motive constellations affect the individual's behavior and well-being.

Consequences of Motive (In)Congruence

The term *incongruence* was originally introduced by Carl Rogers (1961) to depict a state in which one's conscious representation of the self does not converge with one's actual organismic experience, that is, when individuals consciously hold certain values, beliefs, and goals that are not corroborated by spontaneous and largely unconscious processes of organismic evaluation. Rogers believed that such incongruence was the main source of psychological maladaptation and symptom formation. Motive researchers have picked up this term to describe divergent intrapersonal constellations of implicit and explicit motives (McClelland et al., 1989), and a considerable number of studies have found that motive (in)congruence indeed affects subjective well-being and health.

In a pioneering study, Brunstein, Schultheiss, and Grässmann (1998) reported that the emotional well-being of university students increased over the time of one semester if their explicit goals matched their implicit needs for agency and communion, and decreased if implicit and explicit motives did not match. Such effects of motive (in)congruence on subjective well-being have been replicated in diverse Western and non-Western samples for the most frequently studied motivational domains of achievement (Baumann, Kaschel, & Kuhl, 2005; Hofer & Chasiotis, 2003), affiliation-intimacy (Hofer & Chasiotis, 2003; Hofer, Chasiotis, & Campos, 2006), and power (Hofer, Busch, Bond, Li, & Law, 2010). In addition, motive incongruence also relates to more objective indicators of poor psychological adjustment like unhealthy eating behavior (e.g., binge eating under stress; cf. Job, Oertig, Brandstätter, & Allemand, 2010) and psychosomatic symptoms (Baumann et al., 2005). In the light of these findings, Baumann et al. (2005) termed motive incongruence a *hidden stressor*, that is, a dispositional source of negative affect, of which the individual is not fully aware, but which nevertheless continuously affects well-being and health.

The consequences of motive (in)congruence are probably not limited to individual well-being. We expect that intrapersonal motive constellations have interpersonal consequences, especially in the domain of couple relationships. Although no prior investigations have directly addressed potential consequences of motive (in)congruence in this life domain, two studies suggest that relationship quality may be impaired by incongruent constellations of communal motives. First, in a longitudinal study, Winter, John, Stewart, Klohnen, and Duncan (1998) found that women showed better relationship adjustment in terms of higher marital satisfaction, fewer divorces, and fewer disrupted relationships twenty years after motive assessment, if a high implicit need for affiliation (*n* Affiliation) was accompanied by extraversion as compared

with the combination of high *n* Affiliation with introversion. The authors attributed this finding to the surgency aspect of extraversion, that is, extraverted women were supposedly able to enact their affiliation motive actively without inner conflicts and were better able to enjoy togetherness. In another study, Hofer and Busch (2011a) investigated the interaction between *n* Affiliation and self-reported need fulfillment. In this study, satisfaction in couple relationships was lowest if high *n* Affiliation was accompanied by poor subjective need fulfillment regarding relatedness, that is, if a strong affiliation motive was frustrated.

Both of these studies point to the importance of the satisfaction of communal needs for the subjective relationship quality of couples. Motive incongruence is supposed to provide a potential source of need frustration, because the implicit and explicit motive systems, if not aligned, can reciprocally inhibit each other's expression (McClelland et al., 1989; Spangler, 1992). In addition to the risk of inner conflicts and frustrations, incongruent needs for closeness and communion with one's partner also reflect an implicit motivational ambivalence towards one's partner and the relationship. Both individual frustrations and ambivalence are apt to compromise relationship functioning. We therefore believe that communal motive incongruence is a dispositional risk factor for the quality and stability of couple relationships.

In terms of Karney and Bradbury's (1995) *vulnerability-stress-adaptation model of marriage*, maladaptive dispositions like motive incongruence constitute *enduring vulnerabilities*, which affect couple relationships in two ways. First, the likelihood of stressful events in the relationship is increased, and second, the couple's capacity to regulate and adapt to stressful events is impaired, which in turn affects relationship quality and stability. We believe that the immediate consequences of communal motive incongruence for processes of relationship functioning can be manifold. However, two processes seem most likely. First, frustrations of implicit communal needs have been shown to foster indirect aggression (Hofer & Busch, 2011b), which in turn may increase the risk of dyadic conflicts and decrease a couple's capacity to solve conflicts constructively. Second, motivational ambivalence is associated with an anxious attachment style (Mikulincer, Shaver, Bar-On, & Ein-Dor, 2010), a well-established risk factor for relationship functioning. According to Mikulincer and Shaver (2007), anxious attachment reflects a hyperactivation of the security providing attachment system. Anxiously attached individuals tend to see themselves as relatively helpless in regulating their fears and anxieties and thus employ controlling and clinging behaviors to ensure the partner's help and support thereby decreasing a couple's adaptive capacity.

The Present Research

We examined (in)congruence of explicit and implicit needs for closeness and communion with one's partner with regard to its

relevance for relationship outcomes in a sample of heterosexual couples. Figure 1 depicts four motive constellations and their expected functional properties and consequences.

First, individuals scoring high on both implicit and explicit motives should be particularly happy in their relationships, because they benefit from the capacities of both motivational systems. This constellation not only facilitates need fulfillment (i.e., attaining closeness), but also makes it most enjoyable and fulfilling. Second, the combination of congruently low motive scores indicates the absence of intrapersonal motive conflicts and ambivalence. Thus, low-score congruence bears no immediate problem for the individual, but is hardly apt to increase relationship quality, because neither the implicit nor the explicit motive system aims at fostering closeness with one's partner. Third, both incongruent motive constellations bear the risk of motivational conflicts, frustrations, and ambivalence towards the relationship, which are expected to impair relationship quality as outlined above.

We therefore expected individuals high in both communal motives to report the highest satisfaction with their relationships as compared with the three other motive combinations, which all reflect less than ideal motive constellations in the domain of couple relationships. This directional hypothesis accounts for the fact that in couple relationships, high communal motivation per se has been shown to have substantial beneficial effects (Hagemeyer & Neyer, 2012; Sanderson & Cantor, 2001). Thus, in the special case of couple relationships, positive simple effects of communal motives may alter the significance of motive congruence at high or low levels.

In addition to this intrapersonal hypothesis, the present dyadic design allows for the exploration of interpersonal influences. Congruent communal motives may not only increase one's own but also one's partner's relationship satisfaction. Individuals with high-score congruence may be perceived by their partners as more authentic and dedicated in their striving for closeness, because their behavior is corroborated by both motivational systems. On the one hand, impulsive closeness strivings initiated by the implicit system may be channeled by the explicit system into ways that are not perceived as too invasive by the partner. On the other hand, deliberate and reflected behavior guided by the explicit system may be perceived as more sincere and true, if it is affectively enriched by the implicit system.

In the present study, both partners' relationship satisfaction was measured in concurrence with their motives and reassessed 1 year later. Thus, cross-sectional as well as longitudinal effects of motive (in)congruence could be investigated. In addition, information on the stability of the examined couple relationships (i.e., whether couples were still together or had broken up 1 year after motive assessment) was obtained. Thus, next to subjective relationship quality, an objective relationship outcome could be investigated. Again, we expected a beneficial influence of high-score motive congruence on relationship stability.

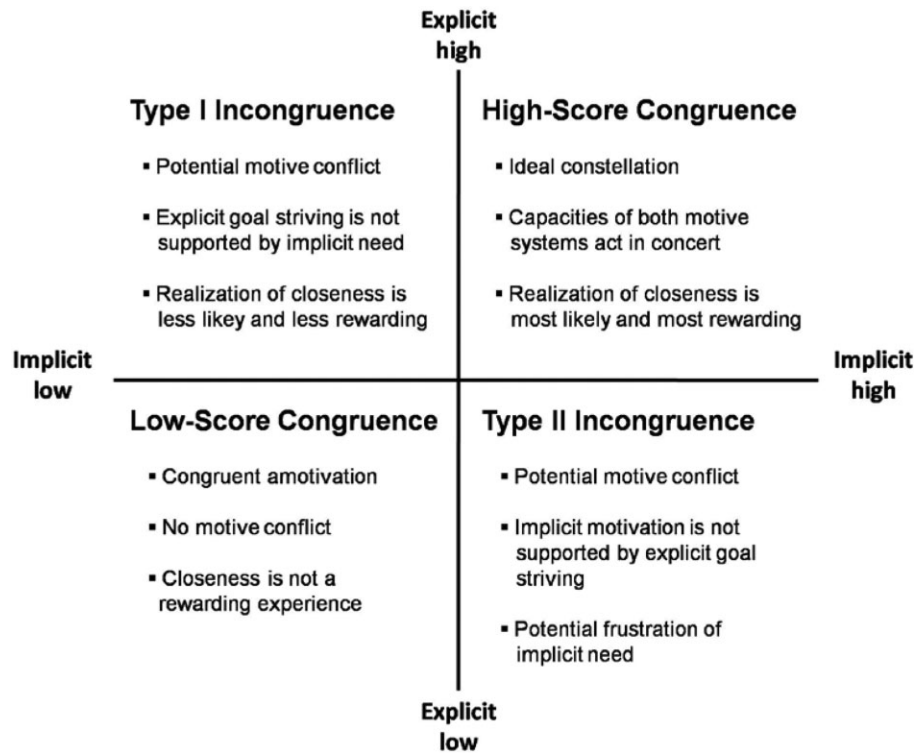


Figure 1 Intrapersonal constellations of implicit and explicit communal motives.

Method

Participants and Procedure

A total of 714 heterosexual couples were recruited for a research project on distance regulation and living arrangements of couples by a mass mailing to households in a rural area (counties of Lower Saxony) and an urban area (Berlin Charlottenburg) in Germany (Hagemeyer & Neyer, 2012; Hagemeyer et al., in press). After a short telephone screening, participants could opt for answering a questionnaire comprising measures of implicit and explicit motives and relationship satisfaction on the Internet or as a paper-and-pencil version. Each couple was compensated with €20 for their participation. For the present study, only those couples where both partners answered the questionnaire of this first assessment (t1) without missing data on the relevant variables were included. In this group of 547 couples, relationship duration ranged from one month to 53 years ($M = 11.4$ years, $SD = 12.6$). The majority of couples (61%) shared a common household, 42% were married, and 52% had children. The number of children ranged from 0 to 4 ($M = 1.0$, $SD = 1.2$). Participants' age ranged from 18 to 73 years with men ($M = 41.6$, $SD = 14.2$) being older than women ($M = 39.4$, $SD = 13.8$; $t(546) = 10.4$, $p < .001$). Education ranged from *no degree* to *doctoral degree*; 58% had a German Abitur (high school) or a higher degree. No significant sex differences in education were observed ($t(546) = 0.7$, $p = .468$).

One year after the first assessment (t2), the couples were invited via mail or e-mail to answer a short follow-up questionnaire, which asked for their current relationship status (still together as a couple versus separated) and, in case the couple was still together, for their current relationship satisfaction. As an incentive, participants were offered an opportunity to take part in a lottery with prizes worth €3,700 in total. A number of 221 couples (40%) provided complete data on relationship satisfaction in the follow-up study. To get more comprehensive information on relationship stability, at least one partner of the missing couples was contacted by phone, which resulted in a group of 482 couples (88%) who provided information on relationship stability. Fifty-seven (12%) of these couples had separated during the preceding year. To test for potential systematic drop-out in the two follow-up samples, attrition analyses were carried out for all variables that were used in the subsequent analyses. Little's (1988) MCAR test indicated that data was missing completely at random in the subsample with complete data on relationship satisfaction ($\chi^2(9) = 5.68$, $p = .771$) as well as in the subsample that provided information on relationship stability ($\chi^2(9) = 5.53$, $p = .786$).

Measures

The questionnaires comprised measures of motives and relationship satisfaction as well as other personality and relationship variables, which are of no interest for the present

investigation. In the following, only those measures that were applied in the analyses of cross-sectional and longitudinal effects of communal motive (in)congruence are introduced.

Implicit and Explicit Communal Motives. The Partner-Related Agency and Communion Test (PACT; Hagemeyer & Neyer, 2012) was applied to assess implicit communal motives at t1. The PACT is a domain-specific variant of the *picture-story-exercise* method (e.g., Schultheiss & Pang, 2007) and measures approach and avoidance components of communal and agentic needs as they apply specifically to couple relationships. Participants were asked to invent fantasy stories about couple relationships in response to picture cues displaying ambiguous social situations. Participants then answered a set of three questions accompanying each picture with regard to the protagonist of their fantasy story: (a) “What is important to this person in this situation, and what is he/she doing?” (b) “How is the person feeling in this situation, and how are his/her feelings for his/her partner?” (c) “Why is the person feeling this way?”. This semistructured response format and the picture stimuli were adapted from the Operant Motive Test (Kuhl & Scheffer, 2002; Scheffer, 2005). The PACT comprises eight picture cues, which were presented sequentially in a fixed order.

Like several previous studies on motive (in)congruence (e.g., Baumann et al., 2005), we focused on the approach component of communal needs. This motive is termed *partner-related need for communion approach* (*pnCommunion Approach*; Hagemeyer & Neyer, 2012) in the PACT. The PACT answers were scored for the frequencies of motive-related themes and expressions according to an empirically validated coding system. PnCommunion Approach was assessed by six content categories, *Emotional Closeness*, *Positive Evaluations of Partner/Relationship*, *Empathy with Partner*, *Commitment/Community*, *Personal Encounters*, and *Attachment*. If a specific category was present in a given answer, it was scored +1. Raw motive scores were generated by summing up the scores across all eight PACT answers. Motive scoring was done by four trained coders who were randomly assigned to different PACT protocols. Absolute agreement among coders, as assessed with intra-class correlations (*ICC*) in a randomly chosen subsample of 65 cases was high ($ICC = .86, p < .001$).

The *explicit communal motive* was assessed at t1 with the *desire for closeness* scale (Hagemeyer et al., in press). The 8 items address appetitive (e.g., “I want to be close to my partner”) and aversive (e.g., “I avoid being very close to my partner”) experiences concerning closeness to one’s partner. Participants rated the frequencies of these experiences on a 7-point scale (1 = *never*, 4 = *sometimes*, 7 = *always*). Closeness appetite and aversion (each assessed with 4 items) were highly correlated in men ($r = -.74, p < .001$) and women ($r = -.79, p < .001$). Aversion items were reversed, and average scores across all 8 items were calculated. The scale showed satisfactory internal consistencies in men ($\alpha = .88$) and women ($\alpha = .91$).

Because of conceptual commonalities, we analyzed the relations between the motive measures and adult romantic attachment styles in two prior studies. The implicit pnCommunion Approach showed only small overlap with self-reported attachment ($r \leq |.17|$) and unique associations with relationship satisfaction (Hagemeyer & Neyer, 2012). The explicit desire for closeness showed moderate correlations with attachment ($r \leq |.52|$) and unique associations with measures of satisfaction, perceived available support, and personality traits (Hagemeyer et al., in press).

Relationship Satisfaction and Stability. Relationship satisfaction was assessed at t1 and t2 with the same item: “How satisfied are you with your relationship in general?” Participants rated their satisfaction on a Likert-type scale ranging from 1 = *not at all* to 11 = *a great deal*. As in prior studies that used single-item measures of relationship satisfaction (e.g., Doss, Rhoades, Stanley, & Markman, 2009), the item showed satisfactory reliability as observed in 1-year stability coefficients above .60 for both sexes (see Table 1). Relationship stability at t2 was assessed either by questionnaire or via telephone as a dichotomous variable (stable = 1, separated = 0).

Results

Preliminary Analyses

The raw motive scores of pnCommunion Approach were significantly related to the lengths of PACT answers ($r = .26$ for women and $r = .29$ for men, $ps < .001$). Thus, the raw scores were residualized for the sum of words across all eight PACT tasks by linear regression. These adjusted motive scores were used in all further analyses. Table 1 presents descriptive statistics and correlations of the investigated variables. *t*-Tests for paired observations revealed no significant sex differences in the means of the variables.¹ The partners’ reports of relationship duration were highly correlated and thus averaged for all further analyses. Steiger’s (1980) *Z*-test indicated only two significant sex differences in the correlations displayed in Table 1: Relationship duration correlated more negatively with women’s desire for closeness ($Z = 2.95, p = .003$) and more positively with men’s relationship satisfaction at t2 ($Z = 2.09, p = .037$).

Analytic Strategy and Presentation of Results. In the analyses of potential influences of motive (in)congruence on relationship satisfaction and stability, we basically relied on the methodology of moderated regression (Aiken & West, 1991). This approach has been used in numerous studies on motive (in)congruence (e.g., Brunstein et al., 1998; Hofer et al., 2006) and bears the opportunity for graphic inspection of significant interaction effects. It is thus more appropriate for tests of our directional hypotheses than the use of discrepancy scores, which is the second established method (e.g., Baumann et al., 2005). A dyadic adaptation of moderated

Table 1 Descriptive Statistics and Correlations of Implicit and Explicit Communal Motives, Relationship Duration, Relationship Satisfaction, and Relationship Stability

Variables	Men		Women		Correlations					
	M	SD	M	SD	1	2	3	4	5 ^a	6 ^b
1. pnCommunion	2.80	1.92	3.20	2.11	.19***	.20***	.01	.17***	.21**	.02
2. Desire for closeness	6.00	0.74	6.01	0.76	.24***	.36***	-.10*	.61***	.48***	.10*
3. T1 Relationship duration	11.33	12.56	11.43	12.60	-.05	-.24***	.99***	.05	.18**	.29***
4. T1 Relationship satisfaction	9.13	1.68	9.13	1.67	.25***	.58***	-.03	.49***	.63***	.22***
5. T2 Relationship satisfaction ^a	9.14	1.80	9.19	1.73	.14*	.53***	.04	.61***	.55***	—
6. Relationship stability ^b	—	—	—	—	.04	.01	.29***	.13**	—	—

Note. $N = 547$ couples for cross-sectional analyses. pnCommunion scores adjusted for word count were used in correlational analyses. Male correlations are above the diagonal. Female correlations are below the diagonal. Correlations between partners of a couple are on the diagonal.

^aCorrelations in subsample with complete information on relationship satisfaction at t2 ($N = 221$ couples).

^bDichotomous relationship stability coded 1 for stable and 0 for separated couples. Correlations in subsample with valid information on relationship stability ($N = 482$ couples).

* $p < .05$. ** $p < .01$. *** $p < .001$.

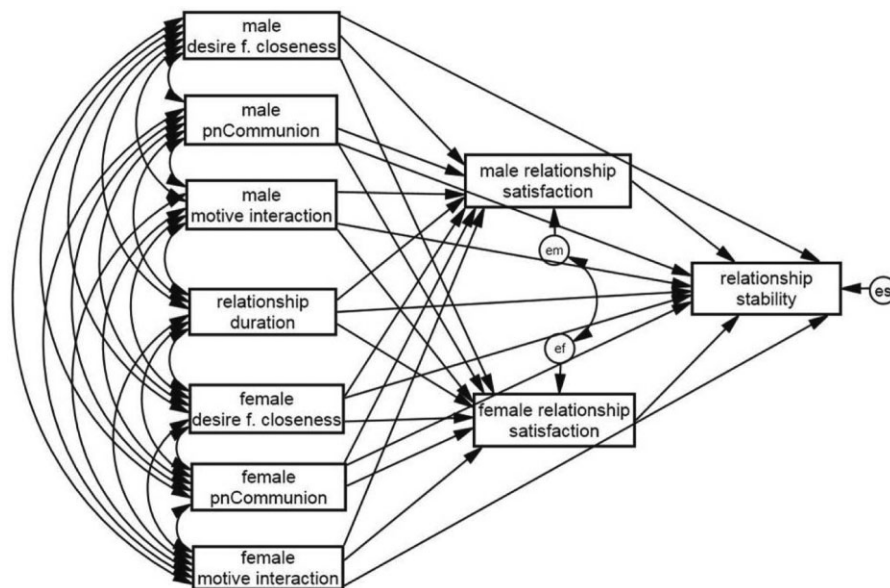


Figure 2 Model 1: Concurrent relationship satisfaction and relationship stability after 1 year are regressed on relationship duration, explicit desire for closeness, implicit pnCommunion Approach, and the motive interaction desire for closeness \times pnCommunion Approach.

regression applying structural equation modeling has been proposed by Ledermann and Bodenmann (2006). The Actor-Partner Moderation Model accounts for dyadic nonindependence in couple data and allowed us to estimate unique simple and interaction effects of both partners' motives on their own (actor effect) and each other's (partner effect) relationship satisfaction.

Three models were fitted to the data using the Mplus 6 software (Muthén & Muthén, 2010). All three models used the same predictors, both partners' explicit and implicit motives and their intrapersonal cross-product interaction terms, but differed in the predicted outcomes. In Model 1, both partners' relationship satisfaction at t1 and the stability of the relationship at t2 were regressed on the motive variables (Figure 2). In

Model 2, both partners' relationship satisfaction at t2 was predicted, and in Model 3 differential changes in both partners' relationship satisfaction over 1 year were predicted. In addition, relationship duration was entered as a covariate in all three models, because it showed significant relations with desire for closeness, relationship satisfaction, and relationship stability (Table 1).

Following the recommendations by Lederman and Bodenmann (2006; see also Kenny, Kashy, & Cook, 2006), we report unstandardized path coefficients (B) for interaction effects. Coefficients for simple effects may be interpreted as standardized coefficients because both motive scores and relationship satisfaction were z -standardized. In line with our directional hypotheses, we expected positive path coefficients for simple

effects as well as for interaction effects of the communal motives. Thus, we report one-tailed p -levels according to confidence intervals (percentile method) obtained from bootstrapping with 5,000 re-samples. Significant interaction patterns are plotted for visual inspection according to the recommendations by Aiken and West (1991).

Model 1. Figure 2 depicts Model 1, which allowed us to test (in)congruence effects on both outcomes, relationship satisfaction and stability, simultaneously. Male and female explicit desire for closeness and implicit pnCommunion Approach were entered as predictors along with their intrapersonal cross-product terms. The motive variables were z -standardized at their grand means and variances (i.e., across women and men) before multiplication (Kenny et al., 2006). Relationship satisfaction was also z -standardized at the grand mean and variance, and the dichotomous stability variable was coded 0 for separated and 1 for stable couples. Because relationship stability was a categorical outcome variable, we used a probit estimation function and applied a robust weighted-least-squares estimator (WLSMV; default option in Mplus 6; Muthén & Muthén, 2010). No sex differences in any of the hypothesized effects were expected, and thus all corresponding paths were set equal for women and men.²

This model showed a good fit to the data ($\chi^2(11) = 8.92$, $p = .629$; CFI = 1.000; RMSEA = .000). Table 2 shows the path coefficients. The explicit desire for closeness had a strong positive actor effect on relationship satisfaction. The partner effect was also significant. In addition, the implicit pnCommunion Approach and the interaction between the two motives showed significant positive actor effects, but no partner effects. To inspect the pattern of the significant interaction effect, predicted relationship satisfaction scores were calculated at predictor and moderator values of 1.5 standard deviations above and below average. As displayed in Figure 3A, the inter-

action effect was mainly driven by the difference in relationship satisfaction between high-score congruence and the incongruent combination of a high explicit motive with a low implicit motive.³ As expected, high-score congruence was associated with the highest relationship satisfaction.

Further, relationship stability over 1 year was significantly predicted by relationship duration, relationship satisfaction, and the motive interaction, whereas the simple effects of neither the explicit nor the implicit motive were significant (Table 2). To inspect the pattern of the significant motive interaction, the probabilities for relationships to remain stable over 1 year depending on the explicit desire for closeness were calculated at values of pnCommunion Approach 1.5 standard deviations below and above the mean (Figure 3B). As expected, partners with incongruent constellations of implicit and explicit motives at t1 showed a higher risk of separation 1 year later. Somewhat surprisingly, not only high-score congruence but also low-score congruence was related to high relationship stability.

It is noteworthy that the interaction term was the only motive predictor in the model that had a direct effect on relationship stability. The indirect path via one's own relationship satisfaction however was also significant ($B = .010$, $p < .05$), whereas the path via the partner's satisfaction was not ($B = .001$, $p > .10$). To further examine indirect ways in which implicit and explicit motives may separately affect relationship stability, their specific indirect effects via the actor's and the partner's relationship satisfaction were tested. For the explicit desire for closeness, both indirect paths were significant ($B = .120$ for the actor path and $B = .045$ for the path via the partner's satisfaction, both $ps < .01$). PnCommunion Approach had a significant indirect effect via one's own, but not via one's partner's satisfaction ($B = .014$, $p < .01$ and $B = .001$, $p > .10$). The amounts of variance explained in Model 1 were 42% for male relationship satisfaction, 41% for

Table 2 Unstandardized Path Coefficients, Standard Errors, and Bootstrap Confidence Intervals From Model 1 Predicting Relationship Satisfaction at t1 and Relationship Stability 1 Year After Motive Assessment

Criterion	t1 Predictors	B	SE	90% CI	
				Lower bound	Upper bound
Relationship satisfaction at t1	Relationship duration	.135**	.026	.091	.177
	Actor's desire for closeness	.539**	.024	.499	.580
	Partner's desire for closeness	.201**	.024	.162	.242
	Actor's pnCommunion	.061**	.023	.023	.099
	Partner's pnCommunion	.004	.024	-.036	.043
	Actor's motive interaction	.046*	.026	.011	.079
	Partner's motive interaction	.005	.023	-.034	.041
	Relationship satisfaction	.223**	.066	.123	.340
Relationship stability after 1 year	Relationship duration	.571**	.092	.443	.747
	Desire for closeness	.034	.075	-.087	.161
	pnCommunion	.009	.059	-.083	.109
	Motive interaction	.131*	.068	.033	.252
	Relationship satisfaction	.223**	.066	.123	.340
	Relationship satisfaction	.010	.010	-.001	.021

Note. $N = 547$ couples. 90% CI = 90% bootstrap confidence interval (percentile method).

* $p < .05$. ** $p < .01$. (One-tailed p -values according to bootstrap confidence intervals.)

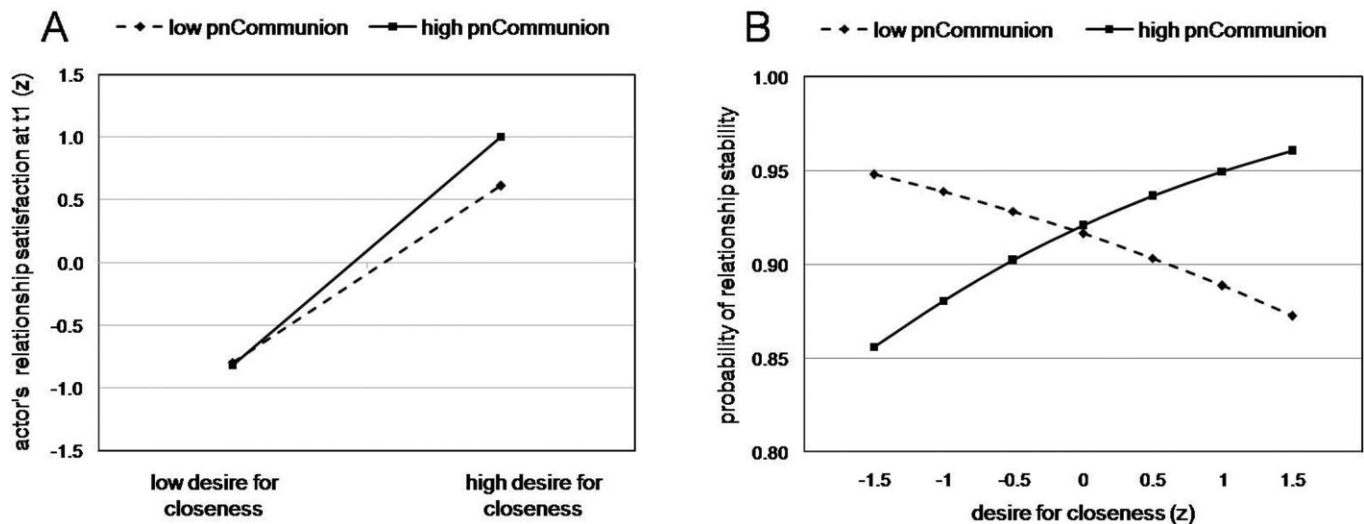


Figure 3 Significant effects of the interaction between explicit desire for closeness and implicit pnCommunion Approach in model 1. Panel A: Interaction effect on the actor's concurrent relationship satisfaction. Panel B: Interaction effect on the stability of couple relationships 1 year after motive assessment.

female relationship satisfaction, and 37% for the latent relationship-stability variable.

Longitudinal Effects of Motive (In)Congruence on Relationship Satisfaction. To examine longitudinal effects of communal motive (in)congruence on relationship satisfaction, two Actor-Partner Moderation Models were fitted to the data of the subsample with complete information on relationship satisfaction 1 year after motive assessment (221 couples).⁴ Model 2 predicted both partners' relationship satisfaction at t2 by the same predictor variables used in Model 1. Model 3 employed the same predictors to analyze differential changes in relationship satisfaction. Male and female residual change scores, that is, the residuals of linear regressions of t2 relationship satisfaction on t1 relationship satisfaction conducted separately for each sex, were used as outcome variables. In both models, all variables were standardized as in Model 1, and all corresponding paths were constrained to be equal for women and men; maximum-likelihood estimation and bootstrapping with 5,000 re-samples were applied.

Model 2 fitted the data well ($\chi^2(7) = 7.08$, $p = .421$; CFI = 1.000; RMSEA = .007). As shown in Table 3, the motive interaction significantly predicted the actor's but not the partner's relationship satisfaction 1 year after motive assessment. The pattern of this interaction (Figure 4) replicated the one observed in the cross-sectional analysis of Model 1 and indicated that high-score motive congruence had a lasting beneficial effect on one's own relationship satisfaction. Model 3 also showed a good fit to the data ($\chi^2(7) = 6.33$, $p = .502$; CFI = 1.000; RMSEA = .000). However, the motive interaction had no significant effects (Table 3). Thus, motive (in)congruence was unrelated to differential changes in relationship satisfaction over 1 year.

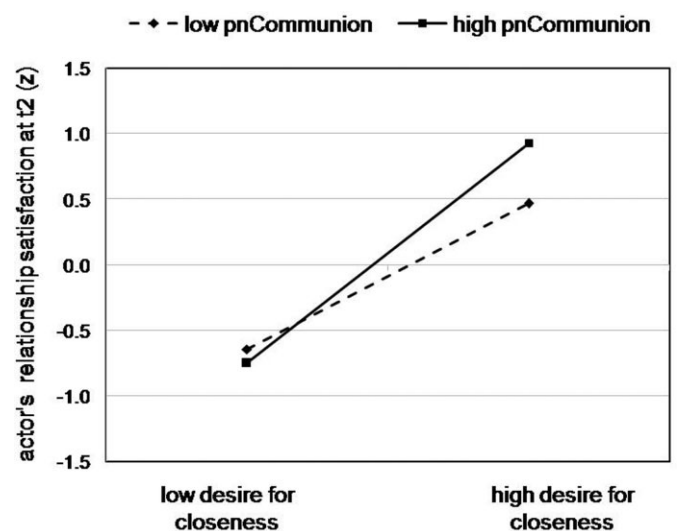


Figure 4 Significant interaction effect of explicit desire for closeness and implicit pnCommunion Approach on the actor's relationship satisfaction 1 year after motive assessment (Model 2).

Supplemental Analyses. To examine the robustness and the relationship-specificity of the observed (in)congruence effects, we conducted two control analyses. First, we aimed to make sure that the significant interaction effects were due to motive constellations within persons and not biased by overlap of within-person and between-partner interactions. Therefore, all two-way interaction terms between male and female implicit and explicit motives were added as covariates to Model 1. The interaction effects on the actor's relationship satisfaction and on relationship stability observed in the original model remained substantial (one-tailed $ps < .05$), and

Table 3 Unstandardized Path Coefficients, Standard Errors, and Bootstrap Confidence Intervals From Model 2 and Model 3 Predicting Relationship Satisfaction and Change in Relationship Satisfaction 1 Year After Motive Assessment

Criterion	t I Predictors	B	SE	90% CI	
				Lower bound	Upper bound
Relationship satisfaction after 1 year (Model 2)	Relationship duration	.206**	.044	.133	.279
	Actor's desire for closeness	.465**	.039	.399	.528
	Partner's desire for closeness	.184**	.045	.112	.260
	Actor's pnCommunion	.059	.042	-.011	.128
	Partner's pnCommunion	.052	.045	-.023	.123
	Actor's motive interaction	.063*	.035	.005	.121
Residual change in relationship satisfaction after 1 year (Model 3)	Partner's motive interaction	.039	.043	-.030	.111
	Relationship duration	.190**	.050	.108	.272
	Actor's desire for closeness	.148**	.046	.070	.222
	Partner's desire for closeness	.106*	.051	.022	.191
	Actor's pnCommunion	.053	.050	-.029	.135
	Partner's pnCommunion	.113*	.051	.027	.198
	Actor's motive interaction	.021	.040	-.042	.087
	Partner's motive interaction	-.009	.051	-.092	.075

Note. $N = 221$ couples. 90% CI = 90% bootstrap confidence interval (percentile method).

* $p < .05$. ** $p < .01$. (One-tailed p -values according to bootstrap confidence intervals.)

no between-partner interactions were significant ($ps > .10$). These findings corroborate the robustness of the (in)congruence effects.

Second, we examined the relationship-specificity of the observed (in)congruence effects, by replacing relationship satisfaction with general life satisfaction in the Actor-Partner Moderation Models. General life satisfaction was assessed with an item similar to relationship satisfaction, except that "relationship" was replaced with "life." As expected, general life satisfaction was neither cross-sectionally nor longitudinally related to the interaction pnCommunion Approach \times desire for closeness ($ps > .10$). These results corroborate the relationship-specificity of the observed (in)congruence effects.

Discussion

The reported findings support the assumption that intrapersonal constellations of implicit and explicit needs for closeness and communion affect the satisfaction and stability of couples. While prior studies have shown that high scores on each separate motive dimension are beneficial for couple relationships (Hagemeyer & Neyer, 2012; McAdams & Vaillant, 1982; Sanderson & Cantor, 2001), the present investigation is the first to examine interactions between the two motive dispositions in this life-domain.

Motive (In)Congruence and Relationship Satisfaction

Dyadic moderation analyses revealed that individuals who were congruently high on explicit and implicit communal motives were the happiest in their relationships and stayed the

happiest over a period of 1 year. Notably, (in)congruence effects were robust when interactions between the two partners' motives were controlled. Thus, as expected, intrapersonal motive (in)congruence seems to be a relevant dispositional influence factor that so far has not been considered in couple research. In addition, control analyses confirmed that relationship-specific motive (in)congruence had no effects on general life satisfaction. This suggests that the observed effects on relationship satisfaction were actually due to processes that are specific for couple relationships (e.g., experiences of frustration and ambivalence in the relationship). Thus, the present investigation did not merely replicate previous effects of domain-general motive (in)congruence on general well-being (e.g., Brunstein et al., 1998), but complements this line of research with a relationship-specific perspective on motive dispositions (see also Hagemeyer & Neyer, 2012; Hagemeyer et al., in press).

Analyses of the associations between motive (in)congruence and one's partner's relationship satisfaction yielded inconsistent results. A positive partner effect of motive (in)congruence was significant in the cross-sectional analysis of a subsample, but in no other model. Thus, caution is warranted in interpreting this result. In previous research, motive (in)congruence has not been addressed with regard to potential interpersonal influences. The present study may suggest that its interpersonal relevance regarding self-reported relationship satisfaction is negligible.

Motive (In)Congruence and Couple Stability

The interaction between implicit and explicit motives predicted couple stability over 1 year independent of relationship duration and relationship satisfaction, which were also signifi-

cant predictors. In line with our expectations, both types of incongruence predicted an increased risk of relationship breakup. However, diverging from the interaction patterns observed in the analyses of relationship satisfaction, not only high-score but also low-score congruence was associated with higher couple stability. On the one hand, it was expected that partners with high-score congruence, who can rely on the motivational capacities of both the explicit and the implicit system, would have more stable relationships. On the other hand, the high stability of couples with low-score congruence, which predicted below average relationship satisfaction, was somewhat surprising. This finding may be due to couples, who stay together for other reasons than communal motivation and enjoyment. At this point, we can only speculate about the nature of these reasons. In younger couples, sexual attraction may keep partners together, and older couples may have become accustomed to each other and established a relationship that is carried by mutual respect and common interests in the best case, or by conventional attitudes towards relationships and marriage in the worst. Also, having children together or other common obligations may keep partners from separating, although they do not feel any need to be close to each other. In any case, low-score motive congruence does not seem to be a direct risk factor for relationship breakup. Rather, incongruent and potentially conflicting constellations of communal motives increase the risk of separation.

It is noteworthy that, whereas both single motives related to couple stability only indirectly through their effects on relationship satisfaction, motive (in)congruence had both indirect and direct effects. The fact that influences of motive incongruence that finally led to breakup were not fully represented in conscious experiences of relationship satisfaction suggests that motive incongruence works as a *hidden stressor* (Baumann et al., 2005) in couple relationships. Partners seem to be partially unaware of the problems caused by motive incongruence or do not attribute them to their relationships. This finding particularly highlights the necessity to study implicit and explicit representations of communal needs simultaneously. As motivational couple research has mainly focused on the explicit level, the present investigation calls for a more comprehensive approach that accounts for implicit motivational processes in couples.

The vulnerability-stress-adaptation-model (Karney & Bradbury, 1995) may serve as a framework for the interpretation of the present findings as well as the conception of future investigations of motive (in)congruence in couples. According to this model, relationship stability is a function of relationship quality, which in turn is a function of a couple's capacity to adapt to stressful events. This capacity as well as the risk of stressful events is influenced by the partners' dispositions (enduring vulnerabilities). Accordingly, implicit and explicit motives had only indirect simple effects via relationship satisfaction on stability. Motive (in)congruence (an enduring vulnerability in terms of the model) seems to circumvent this relay. However, this conclusion could be precipitate, because

relationship quality was assessed solely by self-reported relationship satisfaction in this study. There may be more subtle aspects of relationship quality that mediate this path, such as implicit evaluations of the self and the partner (Banse & Kowalick, 2007; Zayas & Shoda, 2005). Another, however related, explanation for the direct effect of motive (in)congruence on couple stability may be a sudden breakup due to a single event (e.g., sexual infidelity, partner violence, etc.). Subtle conflicts, frustrations, and ambiguities due to motive incongruence, which are not reflected in the conscious evaluations of relationship quality assessed at t1, may culminate in such events, resulting in immediate relationship crisis and separation. However, the processes behind the observed associations cannot be determined with the data at hand, and thus these interpretations are at this point speculative.

Strengths, Limitations, and Future Research

The longitudinal and dyadic design using a large sample with a broad range of age and relationship duration and the inclusion of subjective and objective relationship outcomes are clear strengths of the current study. Although the observed interaction effects on relationship satisfaction were small, they were replicated longitudinally and proved to be robust in control analyses. Because product-interaction terms are often unreliable and underlie other potential biases that contribute to reduced effect sizes (Aguinis, Beaty, Boik, & Pierce, 2005; Aguinis & Stone-Romero, 1997; McClelland & Judd, 1993), we sought to establish a consistent pattern of results across different analyses. This was successful in the case of actor effects, but not for partner effects. We therefore believe that the beneficial actor effects of communal motive congruence are solid and probably underestimate the true effects. This notion is supported by other studies using large heterogeneous samples that also found small but consistent effects of domain-general motive (in)congruence on general well-being (Hofer et al., 2006; Hofer et al., 2010).

Future research should address mediating processes of the observed relations. If the immediate consequences of motive (in)congruence that eventually lead to separation are not fully reflected in neither partner's conscious evaluation of relationship quality, which paths does this influence take? Possibly, stressful experiences due to motive incongruence influence relationships in a subtle way, of which the partners are not fully aware (see Banse & Imhoff, in press, for an overview of research on implicit cognitive processes in relationships). Daily diary studies that assess not only self-reported day-to-day changes in behaviors and attitudes towards the relationship, but also implicit measures of relationship quality, seem most apt to answer this question. In addition, more extensive longitudinal studies over longer time periods including repeated measures of both motives are necessary to further investigate their influences on relationship outcomes. For instance, the finding that motive (in)congruence did not predict change in relationship satisfaction in this study may not be the

final word on this matter, because the assessment interval of 1 year may have been too short, given the high stability of relationship satisfaction (Table 1). Also, such longitudinal studies would corroborate causal inferences, which cannot be confirmed by the present results, because repeated motive assessments are missing.

Finally, studying implicit and explicit motives simultaneously in couple relationships opens a new field for research on moderators of motive (in)congruence. To date, several dispositional moderator variables such as self-regulation competences have been identified (for a comprehensive overview see Thrash, Cassidy, Maruskin, & Elliott, 2010). In the realm of couple relationships, the partner's personality as well as characteristics of the relationship are likely additional moderators of the (in)congruence of relationship-specific motives. We believe that investigating the ways, in which the two partners mutually influence each other's implicit and explicit motives, which in turn affect the relationship, will provide new insights into the motivational dynamics of relationship regulation and development.

Notes

1. Women had significantly higher raw scores of pnCommunion Approach ($t(546) = 3.60, p < .001$), but this sex difference was due to women's longer PACT answers and disappeared when protocol length was controlled ($t(546) = 1.35, p = .176$).
2. Sex differences were, however, tested by relaxing the equality constraints for each single path one after another and comparing the model fits with the original model. No significant differences in the model fits were observed (for all difference tests $\Delta\chi^2(1) < 1.85, p > .10$), and thus no sex differences had to be considered.
3. Because paths were constrained to be equal for the sexes, and neither male nor female intercepts were significantly different from zero in any of the analyses, in Figure 3A and Figure 4 single plots with intercepts set to zero are presented to depict male as well as female interaction effects.
4. In addition, we ran a model with relationship satisfaction at t1 as outcome variable in this subsample. This model replicated the cross-sectional actor effect of motive (in)congruence that was observed in model 1 ($B = .076$, one-tailed $p < .05$). However, diverging from all other analyses but in line with our expectations, the partner effect was also significant ($B = .071$, one-tailed $p < .05$). Visual inspection of the interaction patterns revealed that individuals with high-score congruence and their partners reported the highest relationship satisfaction.

References

- Aguinis, H., Beaty, J. C., Boik, R. J., & Pierce, C. A. (2005). Effect size and power in assessing moderating effects of categorical variables using multiple regression: A 30-year review. *Journal of Applied Psychology, 90*, 94–107.
- Aguinis, H., & Stone-Romero, E. F. (1997). Methodological artifacts in moderated multiple regression and their effects on statistical power. *Journal of Applied Psychology, 82*, 192–206.
- Aiken, L. S., & West, S. G. (1991). *Multiple regression: Testing and interpreting interactions*. Newbury Park, CA: Sage.
- Aron, A. (2000). *Love: An overview*. New York, NY: Oxford University Press.
- Banse, R., & Imhoff, R. (in press). Implicit cognition and relationship processes. In J. A. Simpson & L. Campbell (Eds.), *The Oxford handbook of close relationships*. New York, NY: Oxford University Press.
- Banse, R., & Kowalick, C. (2007). Implicit attitudes towards romantic partners predict well-being in stressful life conditions: Evidence from the antenatal maternity ward. *International Journal of Psychology, 42*, 149–157.
- Baumann, N., Kaschel, R., & Kuhl, J. (2005). Striving for unwanted goals: Stress-dependent discrepancies between explicit and implicit achievement motives reduce subjective well-being and increase psychosomatic symptoms. *Journal of Personality and Social Psychology, 89*, 781–799.
- Ben-Ari, A., & Lavee, Y. (2007). Dyadic closeness in marriage: From the inside story to a conceptual model. *Journal of Social and Personal Relationships, 24*, 627–644.
- Biernat, M. (1989). Motives and values to achieve: Different constructs with different effects. *Journal of Personality, 57*, 69–95.
- Brunstein, J. C. (2008). Implicit and explicit motives. In J. Heckhausen & H. Heckhausen (Eds.), *Motivation and action* (2nd ed., pp. 227–246). New York, NY: Cambridge University Press.
- Brunstein, J. C., Schultheiss, O. C., & Grässmann, R. (1998). Personal goals and emotional well-being: The moderating role of motive dispositions. *Journal of Personality and Social Psychology, 75*, 494–508.
- Cantor, N., & Malley, J. (1991). Life tasks, personal needs, and close relationships. In G. J. O. Fletcher & F. D. Fincham (Eds.), *Cognition in close relationships* (pp. 101–125). Hillsdale, NJ: Lawrence Erlbaum.
- Doss, D. B., Rhoades, G. K., Stanley, S. M., & Markman, H. J. (2009). The effect of the transition to parenthood on relationship quality: An 8-year prospective study. *Journal of Personality and Social Psychology, 96*, 601–619.
- Epstein, S. (1994). Integration of the cognitive and the psychodynamic unconscious. *American Psychologist, 49*, 709–724.
- Hagemeyer, B., & Neyer, F. J. (2012). Assessing implicit motivational orientations in couple relationships: The Partner-Related Agency and Communion Test (PACT). *Psychological Assessment, 24*, 114–128.
- Hagemeyer, B., Neyer, F. J., Neberich, W., & Asendorpf, J. B. (in press). The ABC of social desires: Affiliation, being alone, and closeness to partner. *European Journal of Personality*. doi:10.1002/per.1857
- Hendrick, S. S., & Hendrick, C. (1992). *Liking, loving, and relating* (2nd ed.). Belmont, CA: Thomson Brooks/Cole Publishing Co.
- Hofer, J., & Busch, H. (2011a). Satisfying one's needs for competence and relatedness: Consequent domain-specific well-being depends on strength of implicit motives. *Personality and Social Psychology Bulletin, 37*, 1147–1158.
- Hofer, J., & Busch, H. (2011b). When the needs for affiliation and intimacy are frustrated: Envy and indirect aggression among

- German and Cameroonian adults. *Journal of Research in Personality*, **45**, 219–228.
- Hofer, J., Busch, H., Bond, M. H., Li, M., & Law, R. (2010). Effects of motive-goal congruence on well-being in the power domain: Considering goals and values in a German and two Chinese samples. *Journal of Research in Personality*, **44**, 610–620.
- Hofer, J., & Chasiotis, A. (2003). Congruence of life goals and implicit motives as predictors of life satisfaction: Cross-cultural implications of a study of Zambian male adolescents. *Motivation and Emotion*, **27**, 251–272.
- Hofer, J., Chasiotis, A., & Campos, D. (2006). Congruence between social values and implicit motives: Effects on life satisfaction across three cultures. *European Journal of Personality*, **20**, 305–324.
- Hofmann, W., Gawronski, B., Gschwendner, T., Le, H., & Schmitt, M. (2005). A meta-analysis on the correlation between the Implicit Association Test and explicit self-report measures. *Personality and Social Psychology Bulletin*, **31**, 1369–1385.
- Impett, E. A., Strachman, A., Finkel, E. J., & Gable, S. L. (2008). Maintaining sexual desire in intimate relationships: The importance of approach goals. *Journal of Personality and Social Psychology*, **94**, 808–823.
- Job, V., Oertig, D., Brandstätter, V., & Allemand, M. (2010). Discrepancies between implicit and explicit motivation and unhealthy eating behavior. *Journal of Personality*, **78**, 1209–1238.
- Karney, B. R., & Bradbury, T. N. (1995). The longitudinal course of marital quality and stability: A review of theory, methods, and research. *Psychological Bulletin*, **118**, 3–34.
- Kenny, D. A., Kashy, D. A., & Cook, W. L. (2006). *Dyadic data analysis*. New York, NY: Guilford Press.
- King, L. A. (1995). Wishes, motives, goals, and personal memories: Relations of measures of human motivation. *Journal of Personality*, **63**, 987–1007.
- Kuhl, J., & Scheffer, D. (2002). *The Operant Motive Test: Scoring manual*. Unpublished manuscript, University of Osnabrück, Germany.
- Laurenceau, J.-P., Kleinman, B. M., Kaczynski, K. J., & Carver, C. S. (2010). Assessment of relationship-specific incentive and threat sensitivities: Predicting satisfaction and affect in adult intimate relationships. *Psychological Assessment*, **22**, 407–419.
- Laurenceau, J.-P., Troy, A. B., & Carver, C. S. (2005). Two distinct emotional experiences in romantic relationships: Effects of perceptions regarding approach of intimacy and avoidance of conflict. *Personality and Social Psychology Bulletin*, **31**, 1123–1133.
- Ledermann, T., & Bodenmann, G. (2006). Moderator- und Mediator-effekte bei dyadischen Daten [Moderator and mediator effects in dyadic data]. *Zeitschrift für Sozialpsychologie*, **37**, 27–40.
- Little, R. J. A. (1988). A test of missing completely at random for multivariate data with missing values. *Journal of the American Statistical Association*, **83**, 1198–1202.
- McAdams, D. P. (1992). The intimacy motive. In C. P. Smith (Ed.), *Motivation and personality: Handbook of thematic content analysis* (pp. 224–228). New York, NY: Cambridge University Press.
- McAdams, D. P., & Vaillant, G. E. (1982). Intimacy motivation and psychosocial adjustment: A longitudinal study. *Journal of Personality Assessment*, **46**, 586–593.
- McClelland, D. C. (1980). Motive dispositions: The merits of operant and respondent measures. In L. Wheeler (Ed.), *Review of personality and social psychology* (Vol. 1, pp. 10–41). Beverly Hills, CA: Sage.
- McClelland, D. C. (1985). *Human motivation*. Glenview, IL: Scott, Foresman.
- McClelland, D. C., Koestner, R., & Weinberger, J. (1989). How do self-attributed and implicit motives differ? *Psychological Review*, **96**, 690–702.
- McClelland, G. H., & Judd, C. M. (1993). Statistical difficulties of detecting interactions and moderator effects. *Psychological Bulletin*, **114**, 376–390.
- Mikulincer, M., & Shaver, P. R. (2007). *Attachment in adulthood: Structure, dynamics, and change*. New York, NY: Guilford Press.
- Mikulincer, M., Shaver, P. R., Bar-On, N., & Ein-Dor, T. (2010). The pushes and pulls of close relationships: Attachment insecurities and relational ambivalence. *Journal of Personality and Social Psychology*, **98**, 450–468.
- Morgan, C., & Murray, H. A. (1935). A method for investigating fantasies: The Thematic Apperception Test. *Archives of Neurology and Psychiatry*, **34**, 289–306.
- Muthén, L. K., & Muthén, B. O. (2010). *Mplus user's guide* (6th ed.). Los Angeles, CA: Muthén & Muthén.
- Read, S. J., & Miller, L. C. (1989). Explanatory coherence in understanding persons, interactions, and relationships. *Behavioral and Brain Sciences*, **12**, 485–485.
- Rogers, C. R. (1961). *On becoming a person*. Boston, MA: Houghton Mifflin.
- Sanderson, C. A., & Cantor, N. (1997). Creating satisfaction in steady dating relationships: The role of personal goals and situational affordances. *Journal of Personality and Social Psychology*, **73**, 1424–1433.
- Sanderson, C. A., & Cantor, N. (2001). The association of intimacy goals and marital satisfaction: A test of four mediational hypotheses. *Personality and Social Psychology Bulletin*, **27**, 1567–1577.
- Scheffer, D. (2005). *Implizite Motive [Implicit Motives]*. Göttingen, Germany: Hogrefe.
- Schnabel, K., Asendorpf, J. B., & Greenwald, A. G. (2008). Assessment of individual differences in implicit cognition: A review of IAT measures. *European Journal of Psychological Assessment*, **24**, 210–217.
- Schultheiss, O. C., & Brunstein, J. C. (1999). Goal imagery: Bridging the gap between implicit motives and explicit goals. *Journal of Personality*, **67**, 1–38.
- Schultheiss, O. C., & Pang, J. S. (2007). Measuring implicit motives. In R. W. Robins, R. C. Fraley, & R. Krueger (Eds.), *Handbook of research methods in personality psychology* (pp. 322–344). New York, NY: Guilford Press.
- Schultheiss, O. C., Yankova, D., Dirilikvo, B., & Schad, D. (2009). Are implicit and explicit motive measures statistically independent? A fair and balanced test using the Picture Story Exercise and

- a cue- and response-matched questionnaire measure. *Journal of Personality Assessment*, **91**, 72–81.
- Spangler, W. D. (1992). Validity of questionnaire and TAT measures of need for achievement: Two meta-analyses. *Psychological Bulletin*, **112**, 140–154.
- Steiger, J. H. (1980). Tests for comparing elements of a correlation matrix. *Psychological Bulletin*, **87**, 245–251.
- Strack, F., & Deutsch, R. (2004). Reflective and impulsive determinants of social behavior. *Personality and Social Psychology Review*, **8**, 220–247.
- Thrash, T. M., Cassidy, S. E., Maruskin, L. A., & Elliott, A. J. (2010). Factors that influence the relation between implicit and explicit motives: A general implicit-explicit congruence framework. In O. C. Schultheiss & J. C. Brunstein (Eds.), *Implicit motives* (pp. 308–346). New York, NY: Oxford University Press.
- Winter, D. G., John, O. P., Stewart, A. J., Klohnen, E. C., & Duncan, L. E. (1998). Traits and motives: Toward an integration of two traditions in personality research. *Psychological Review*, **105**, 230–250.
- Zayas, V., & Shoda, Y. (2005). Do automatic reactions elicited by thoughts of romantic partner, mother, and self relate to adult romantic attachment? *Personality and Social Psychology Bulletin*, **31**, 1011–1025.