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# Interference and Facilitation Among Personal Goals: Differential Associations With Subjective Well-Being and Persistent Goal Pursuit

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*Three studies demonstrate that mutual facilitation and interference among personal goals are distinct characteristics rather than mutually exclusive opposites and have different functions for psychological well-being and goal pursuit. The three studies vary in design (cross-sectional, short-term longitudinal) and follow a multimethod approach using questionnaires, diaries, and objective behavioral information. Results show that interference among goals (resulting from resource constraints and incompatible goal attainment strategies) is negatively associated with trait and state well-being, whereas mutual facilitation among goals (resulting from instrumental goal relations and overlapping goal attainment strategies) is positively associated with involvement in goal pursuit.*

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**Keywords:** *personal goals; intergoal interference; intergoal facilitation; subjective well-being; goal pursuit*

There is little disagreement that personal goals affect behavior and well-being (Gollwitzer & Moskowitz, 1996; Schmuck & Sheldon, 2001). The processes underlying how goals influence behavior and well-being in everyday life, however, are not yet well understood. One of the reasons for this might be that most goal theories consider single, isolated goals and their characteristics. Typically, people have multiple goals at a time. For example, a person might have the goals *to be an excellent student, to enjoy life, to spend more time with family, and to exercise regularly*. Such multiple goals are not necessarily independent. For instance, exercising regularly and enjoying life might facilitate each other as exercising might help one to relax and open up to the enjoyable sides of life. Being an excellent student and spending more time with family, in contrast, might interfere with each other as both goals draw on the same limited resource, time. In other

words, multiple personal goals may influence each other in positive (facilitative) or negative (interfering) ways.

Intergoal facilitation occurs when the pursuit of one goal simultaneously increases the likelihood of success in reaching another goal. Possible forms are *instrumental relations among goals* and *overlapping goal attainment strategies* (cf. Riediger, 2001). Instrumental relations imply that progressing toward one goal already represents a step in progressing toward another goal (e.g., *being professionally successful* may generate resources for *financially supporting one's children*). Overlapping goal-attainment strategies exist when the very same action is instrumental for more than one goal (e.g., attending ballet lessons may be effective for both *learning to dance* and *getting in touch with new people*).

In contrast, intergoal interference occurs when the pursuit of one goal impairs the likelihood of success in reaching another goal. It may result from *resource constraints* and *incompatible goal attainment strategies* (cf. Riediger, 2001). Resource limitations can lead to interference when several goals require more of the same, limited resource than is available (e.g., *being professionally successful* may take away time from *spending time with fam-*

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ily). The second form of intergoal interference results when strategies for attaining different goals are incompatible. *To keep my relationships on a 50-50 basis* and *to dominate, control, and manipulate people and situations* are examples of two interfering goals cited by Emmons and King (1988, p. 1042) that imply such an inherent incompatibility.

As of yet, it is empirically open as to how facilitation and interference are related to each other. The conception of interference and facilitation as opposites may appear intuitively appealing. As we elaborate in more detail below, however, we posit that facilitation and interference among goals are more adequately conceptualized as two independent dimensions: Goals might interfere with each other in some aspects but facilitate each other in others.

The aim of this article is to contribute to the understanding of the processes underlying the relationships between personal goals, well-being, and behavior by investigating the associations of intergoal facilitation and interference on the hand with subjective well-being and goal pursuit on the other.

#### *Intergoal Relations and Subjective Well-Being*

Most researchers and laypeople alike would probably predict a negative relationship between interference among personal goals and psychological well-being: The more interfering their goals are, the less well people should feel. Interestingly, however, the empirical picture is less clear. Studies using unipolar response scales assessing exclusively intergoal interference (e.g., with response options ranging from 1 (*no conflict*) to 5 (*pervasive conflict*; Perring, Oatley, & Smith, 1988) found that higher levels of interference were associated with impairments in psychological well-being (Palys & Little, 1983; Perring et al., 1988).<sup>1</sup> In contrast, studies using bipolar assessment instruments with response scales ranging from *strong facilitation* to *strong interference* found inconsistent or no associations with psychological well-being (Emmons & King, 1988; King, Richards, & Stemmerich, 1998; Sheldon & Kasser, 1995). Emmons and King (1988), for example, asked participants to rate the impact that being successful in one goal has on another goal, with response options ranging from -2 (*very harmful*), to 0 (*no effect*), to +2 (*very helpful*).

Bipolar scales presuppose that intergoal interference and facilitation should be treated as mutually exclusive opposites on one dimension. We propose that intergoal interference and facilitation are more adequately conceptualized as two distinct dimensions. Suppose, for example, that a person has the goals *professional success* and *exercising regularly*. This person might evaluate exercising as *facilitating* the work goal because exercising might help with relieving stress and thus enhance the

working efficacy (*instrumental relation among goals*). Or the person might exercise with colleagues, thus perhaps providing a context for getting work-related information (*overlapping goal attainment strategies*). The same person, however, might also experience that exercising *interferes* with the work goal because it takes time that cannot be spent working (*resource constraints*). In such a constellation, the meaning of a bipolar response scale is ambiguous. Its midpoint can signify either that the two goals are independent (i.e., neither interfering nor facilitative) or that the two goals are about equally interfering and facilitative (for a similar argument regarding attitude ratings, see Cacioppo & Berntson, 1994).

One aim of the present research is to assess interference and facilitation among goals with two separate unipolar instruments and to investigate their respective associations with subjective well-being. Our prediction was that the experience of *interference* among goals is aversive and impairs subjective well-being. Mutual *facilitation* among goals, however, should be experienced as positive. This prediction is in line with models that ascribe affect a regulatory function in action processes (e.g., Bagozzi, Baumgartner, & Pieters, 1998). These models propose that negative affect signals threat to goal attainment and that it enhances activities directed at the resolution of this problem. Positive affect, in contrast, is proposed to occur when one's actions and the circumstances are favorable for the realization of one's goals. It signals that the respective action should be continued. Several empirical studies support this hypothesis by showing that goal progress is associated with positive emotions and other aspects of psychological well-being (cf. Diener, Suh, Lucas, & Smith, 1999).

Given that people seem to react stronger to losses than gains (e.g., Hobfoll, 1998; Kahneman & Tversky, 1984), we further predicted that factors endangering goal attainment have a stronger impact on well-being than factors promoting it. In other words, interference among personal goals might have a stronger effect on well-being than intergoal facilitation.

#### *Intergoal Relations and Goal Pursuit*

Another focus of goal research is on how goals affect behavior. There is little previous research on the association between intergoal relations and people's engagement in goal pursuit. In a study by Emmons and King (1988), a bipolar index interpreted as indicator of goal conflict was negatively related to goal pursuit. Similarly, two studies investigating physical activity (Gebhardt, 1997; Gebhardt & Maes, 1998) and smoking cessation (McKeeman & Karoly, 1991) indicated that people pursue a goal (here: a particular health behavior) less if it interferes with their other goals. Both studies used unipolar assessment scales but did not consider the possible

impact of positive (facilitative) intergoal relations on goal pursuit. Moreover, McKeeman and Karoly assessed interference only retrospectively.

The present studies investigate the associations between both intergoal interference and intergoal facilitation on one hand and multiple (including objective) indicators of goal pursuit on the other, using cross-sectional and prospective study designs. Our prediction was that interference among goals also interferes with goal pursuit. Intergoal interference implies that pursuing one goal at the same time hinders other goals. Awareness of this should impair the attractiveness of engaging in goal-directed activities. In contrast, intergoal facilitation should enhance goal pursuit. The experience that doing something for one goal also furthers other goals should render goal pursuit a gratifying and successful activity.

Moreover, we hypothesized that intergoal facilitation might play a comparatively more important role than intergoal interference. Mutually facilitative goals may be efficiently pursued simultaneously without exhausting one's resources. Mutual facilitation among goals, thus, may enhance goal-directed activities by allowing an efficient use of one's resources in the interest of one's goals. People with interfering goals, however, might mobilize more resources for goal pursuit as a compensatory strategy. A young mother with the goals *spending a lot of time with my child* and *being an excellent student*, for example, might extend her waking day and study at night in order to counteract the negative effects that spending much time with the child might have for academic success. Compared with the enhancing effect of intergoal facilitation, the inhibiting effect of intergoal interference on goal pursuit might therefore be comparatively less strong—at least as long as compensatory efforts do not fully exhaust the available resources.

#### *Overview of the Present Studies*

In short, our central predictions were that intergoal facilitation and interference are distinct characteristics rather than opposites on one dimension and that they are differentially associated with well-being and goal pursuit. To investigate these predictions, we conducted three studies. In all studies, we obtained separate indicators for interference and facilitation among the participants' most important goals. We further assessed multiple facets of both trait and state psychological well-being and followed a multimethod approach for measuring goal pursuit. In Study 1, we used a cross-sectional design and a self-report measure of goal pursuit. Study 2 had a prospective design. All participants in this study shared the goal to start regular physical exercise. This allowed us to obtain objective information on goal-related activities (i.e., frequency of exercising). Study 3 also had a pro-

spective design and assessed goal-related activities and subjective well-being in everyday life using a diary method. We recruited younger and older adults for all three studies.

#### STUDY 1

##### *Method*

##### *PARTICIPANTS*

One hundred eleven adults were recruited in Berlin, Germany, via a newspaper advertisement ( $n = 53$  younger adults aged 20.0 to 30.0 years,  $M = 24.3$ ;  $n = 58$  older adults aged 59.9 to 77.7 years,  $M = 65.2$ ). Of the participants, 60.4% were female; 7.3% of the participants had graduated from junior high school (8th grade), 22.7% had graduated from Secondary School Level 1 (10th grade), 47.3% had graduated from high school (12th or 13th grade), and 22.7% of the sample held a higher academic (university) degree.

##### *PROCEDURE*

Participants completed a set of questionnaires in small groups. They were reimbursed DM 40 (approximately \$18).

##### *INSTRUMENTS*

*Personal goals.* Participants were asked to report four personal goals that they had for the near future, currently judged to be important, and still expected to be important in some months. The instruction included a brief explanation of the concept of goals as well as sample life domains and sample goals.

*Interference and facilitation among goals.* Participants were instructed to pair each of their four goals with each of the other three goals and to respond, for each of these 12 goal pairs, to the Intergoal Relations Questionnaire (IRQ; Riediger, 2001). The IRQ measures interference among goals in terms of (a) time constraints, (b) energy constraints, (c) financial constraints (*How often can it happen that, because of the pursuit of Goal A, you do not invest as much time/energy/money into Goal B as you would like to?*), and in terms of (d) incompatible goal attainment strategies (*How often can it happen that you do something in the pursuit of Goal A that is incompatible with Goal B?*). Mutual facilitation among goals is assessed in terms of (a) instrumental goal relations (*The pursuit of Goal A sets the stage for the realization of Goal B*) and in terms of (b) overlap of goal attainment strategies (*How often can it happen that you do something in the pursuit of Goal A that is simultaneously beneficial for Goal B?*). Response options ranged from 1 (*not at all true or never/very rarely*) to 5 (*very true or very often*). Because intergoal relations are not necessarily symmetrical, each goal pair was evaluated twice (i.e., impact of pursuing Goal A on Goal B and impact of



pursuing Goal B on Goal A). In all, participants responded to a total of 72 items. Averaging the same item across all 12 goal pairs yielded the interference and facilitation subscales. Further information on psychometric properties of the instrument is given in the Results section.

*Subjective well-being.* We used the Multidimensional Affect Rating Scale (Steyer, Schwenkmezger, Notz, & Eid, 1997) to assess the participants' habitual positive and negative affect. Four items (adjectives) each assess *positive mood, ease, and alertness* as dimensions with positive valence and *negative mood, restlessness, and fatigue* as dimensions with negative valence. Participants indicated how often they had experienced each emotion during the past 4 months on a 5-point rating scale ranging from 1 (*very seldom*) to 5 (*very often*). Summing the respective items yielded two scores indicating the habitual experience of positive ( $M = 41.74$ ,  $SD = 7.77$ , Cronbach's  $\alpha = .93$ ) and negative affect ( $M = 31.35$ ,  $SD = 9.45$ , Cronbach's  $\alpha = .92$ ).

The Life Evaluation Scale (Ferring, Filipp, & Schmidt, 1996) assesses life satisfaction from different temporal perspectives. Using a 5-point rating scale, six items measure current life satisfaction ( $M = 4.13$ ,  $SD = .64$ , Cronbach's  $\alpha = .83$ ), four items measure retrospective life satisfaction ( $M = 3.46$ ,  $SD = .70$ , Cronbach's  $\alpha = .79$ ), and five items measure prospective life satisfaction (i.e., being concerned or confident about the future;  $M = 3.51$ ,  $SD = .84$ , Cronbach's  $\alpha = .87$ ).

The Pressure-to-Change Scale (Filipp & Ferring, 1991) assesses (lack of) life satisfaction as the extent of change desired in several life domains. The scale was originally developed in the context of severe chronic illness. We modified the scale to cover 16 life domains often mentioned in goals of healthy adults. Averaging across all items (5-point rating scale) yielded an indicator of domain-specific (lack of) life satisfaction ( $M = 3.48$ ,  $SD = .94$ , Cronbach's  $\alpha = .86$ ).

Exploratory factor analysis (generalized least squares extraction) of the three subscales of the Life Evaluation Scale and the Pressure-to-Change Scale yielded a one-factor solution (eigenvalue  $> 1$ ) accounting for 70.53% of the variance (mean factor loading = .78,  $SD = .15$ ). Therefore, we averaged the z-scores of the Life Evaluation Scale and of the reverse-coded Pressure-to-Change Scale to obtain an aggregate index of life satisfaction ( $M = .00$ ,  $SD = .84$ ).

We further included the short version of the Scales of Psychological Well-Being (Ryff & Keyes, 1995). The instrument assesses self-acceptance, personal growth, autonomy, positive relations with others, environmental mastery, and purpose in life with three items each. These facets have been demonstrated to be joined together by

TABLE 1: Pearson's Correlations of the IRQ Interference and Facilitation Subscales in Study 1

Subscale	Interference				Facilitation	
	1	2	3	4	1	2
Interference						
1. Time constraints	1.00					
2. Financial constraints	.52**	1.00				
3. Energy constraints	.86**	.58**	1.00			
4. Incompatible strategies	.68**	.48**	.61**	1.00		
Facilitation						
1. Strategy overlap	.10	.31**	.15	.18	1.00	
2. Instrumental relations	.05	.32**	.12	.08	.84**	1.00

NOTE: IRQ = Intergoal Relations Questionnaire.  
\*\* $p < .01$ .

a single higher-order factor interpreted as positive psychological functioning (Ryff & Keyes, 1995). Because we held no differential hypotheses for the subscales, and because the number of items per subscale was small, we obtained an overall indicator of positive psychological functioning by averaging across all 18 items after recoding negatively formulated items (5-point rating scale;  $M = 3.81$ ,  $SD = .43$ , Cronbach's  $\alpha = .78$ ).

*Goal pursuit.* For each of the four goals under study, participants responded to the following items: (a) *How much do you do for this goal?* (b) *How often do you think about this goal?* (c) *How much time do you invest in this goal?* (d) *How much does this goal determine your everyday life?* and (e) *How much do you invest yourself into the realization of this goal?* Items a to d were responded to on a 7-point, and item e, on a 5-point rating scale. To make the unit of measurement the same for all variables, we z-transformed the items. An exploratory factor analysis (generalized least squares extraction) across these z-transformed items (averaged across all four goals) yielded a one-factor solution (eigenvalue  $> 1$ ; mean factor loading = .79,  $SD = .13$ ) accounting for 64.16% of the variance. We therefore computed a single score (mean of all z-transformed items across all four goals) indicating the participants' engagement in goal pursuit ( $M = .00$ ,  $SD = .54$ , Cronbach's  $\alpha = .88$ ).

## Results<sup>2</sup>

### INTERGOAL RELATIONS QUESTIONNAIRE (IRQ)

The IRQ revealed a clear two-factor solution of intergoal facilitation as one factor and intergoal interfer-

**TABLE 2: Predicting Facets of Subjective Well-Being and Self-Reported Goal Pursuit in Study 1: Results of Multiple Regression Analyses**

Dependent Variable	Independent Variables		Multiple R
	Facilitation	Interference	
Positive psychological functioning	.13	-.21*	.23
Habitual positive affect	.18	-.30**	.32**
Habitual negative affect	-.11	.43**	.42**
Life satisfaction	.12	-.39**	.38**
Goal pursuit	.21**	.03	.29**

\* $p < .05$ . \*\* $p < .01$ .

ence as the other. Table 1 shows the correlations among the six subscales of the IRQ. Exploratory factor analysis on the subscale scores (generalized least squares extraction with oblimin, direct rotation) yielded a two-factor solution (eigenvalues  $> 1$ ). Using factor loadings of greater than or equal to .30 as criterion for the allocation of subscales to factors, all IRQ interference subscales loaded on one factor (mean factor loading = .79,  $SD = .19$ ), and all IRQ facilitation subscales loaded on the other factor (mean factor loading = .93,  $SD = .87$ ). The solution accounted for a substantial amount (79.75%) of the variance. Conducting the analysis separately for both age-groups yielded the same pattern.

This two-factor structure also emerged for each of the specific goal pairs. Generalized least squares extraction with oblimin, direct rotation, performed separately on the six items of each of the 12 goal pairs, consistently yielded two factors (eigenvalues  $> 1$ ) accounting for 65.74% to 75.96% of the variance. With a critical factor loading of greater than or equal to .30, these factors unambiguously reflected intergoal interference and intergoal facilitation.

These results contradict the assumption that intergoal facilitation and interference should be treated as mutually exclusive opposites. Rather, interrelations among a person's goals should be characterized by the extent of both interference *and* facilitation. We therefore computed two composite scores of the IRQ: the intergoal interference composite (mean of the interference subscales;  $M = 2.16$ ,  $SD = .58$ , Cronbach's  $\alpha = .94$ ) and the intergoal facilitation composite (mean of the facilitation subscales;  $M = 2.94$ ,  $SD = .76$ , Cronbach's  $\alpha = .90$ ). The correlation between the composite scores was small ( $r = .19$ ,  $p < .05$ ) and not significantly different between both age-groups ( $p > .05$ ).

ASSOCIATIONS BETWEEN  
INTERGOAL FACILITATION AND INTERFERENCE,  
SUBJECTIVE WELL-BEING, AND GOAL PURSUIT

Do facilitation and interference among personal goals predict subjective well-being and involvement in goal pursuit? We first tested whether the associations between intergoal facilitation or interference (as predictor variables) and the various well-being facets and the goal pursuit composite (as dependent variables) depended on the interference-by-facilitation interaction. We also tested whether these associations were significantly different between both age-groups. None of these interactions were significant ( $p > .05$ ). Table 2 shows results of more parsimonious models without the interactions. As predicted, these regression models yielded a clearly differential pattern of associations for intergoal facilitation and interference.

Intergoal *facilitation* did not contribute significantly to the prediction of any of the four well-being indicators. It was, however, significantly positively associated with goal pursuit. The more facilitation participants reported among their goals, the more they reported to be involved in the pursuit of these goals. In contrast, *interference* among goals was not predictive of goal pursuit but consistently negatively associated with all well-being facets. The more intergoal interference participants reported, the less their subjective well-being was. The size of these associations was small to moderate ( $.23 \leq$  multiple  $R \leq .42$ ).

Summary of Study 1

Study 1 showed that two distinct properties characterize the relations among a person's goals: the degree to which these goals interfere with each other and the degree to which they facilitate each other. These characteristics were differentially related to subjective well-being and goal pursuit. Intergoal interference, but not facilitation, was associated with lower psychological well-being. Intergoal facilitation, but not interference, was associated with higher self-reported engagement in goal pursuit.

STUDY 2

One purpose of Study 2 was to investigate whether the results of Study 1 were replicable in another sample. In addition, Study 2 included *objective* measures of goal pursuit. For that purpose, all participants shared the goal to start regular physical exercise. This goal was particularly well suited because of the following characteristics: (a)

Goal pursuit (i.e., exercise adherence) is accessible to objective observation. (b) Starting to exercise is a comparatively frequent goal that is potentially relevant for adults of various ages. (c) Persons who start exercising show a sufficiently high variation in their exercise adherence within a relatively short time.

### Method

#### PARTICIPANTS

One hundred forty-five adult exercise beginners were recruited from 28 sports facilities in Berlin, Germany ( $n = 99$  younger adults aged 19.2 to 35.4 years,  $M = 25.1$ ;  $n = 46$  older adults aged 55.5 to 78.1 years,  $M = 63.8$ ). Of the participants, 74.5% were female; 8.3% of the participants had graduated from junior high school (8th grade), 20% had graduated from Secondary School Level 1 (10th grade), 59.3% had graduated from high school (12th or 13th grade), and 12.4% of the sample held a higher academic (university) degree.

#### PROCEDURE

Participants completed a set of questionnaires in small groups. Here, these sessions are referred to as Time 1 (T1). Sports facilities provided objective exercise information for 5 months following T1. All participants were reimbursed DM 40 (approximately \$18).

#### INSTRUMENTS

With two exceptions, the instruments were the same as in Study 1. First, all participants shared the goal to start exercising and reported three important goals they had besides exercising. The instruction was the same as in Study 1. Participants responded to the IRQ with respect to all four goals (exercise goal and three additional goals; IRQ facilitation composite:  $M = 2.99$ ,  $SD = .78$ , Cronbach's  $\alpha = .91$ ; IRQ interference composite:  $M = 2.20$ ,  $SD = .56$ , Cronbach's  $\alpha = .94$ ). The correlation between the composites was not significant ( $r = -.01$ ,  $p > .05$ ) and not significantly different between both age-groups ( $p > .05$ ).

Second, in Study 1, we had obtained self-reported information about the participants' involvement in goal pursuit. In Study 2, we obtained objective information on the longer term pursuit of one of the goals, the goal to start exercising. For each of the 5 months following T1, we received information on the participants' exercise frequency from attendance lists and electronic attendance registration data (Month 1:  $M = 3.12$ ,  $SD = 3.01$ ; Month 2:  $M = 3.87$ ,  $SD = 2.79$ ; Month 3:  $M = 2.30$ ,  $SD = 2.24$ ; Month 4:  $M = 2.34$ ,  $SD = 2.37$ ; Month 5:  $M = 2.00$ ,  $SD = 2.58$ ). This information was available for 107 participants. Two participants failed to exercise at all during the study interval.

### Results

#### THE INTERGOAL RELATIONS QUESTIONNAIRE

To test whether the two-factor structure also applied in Study 2, we conducted multigroup confirmatory factor analyses using EQS 5.7b. All models were tested on the basis of the covariance matrices of the IRQ subscales using the maximum likelihood estimation function.

On the basis of the results of Study 1, we first tested a multigroup model specifying a structure of two correlated first-order factors in both age-groups, in which the IRQ interference subscales loaded on one factor and the IRQ facilitation subscales loaded on the other factor. Factor correlations, factor loadings, factor variances, and error variances were not constrained (Model 1).<sup>3</sup> The overall fit of this model was satisfactory,  $\chi^2(df = 18) = 25.52$ ,  $p = .11$ , root mean square error of approximation (RMSEA) = .05, Comparative Fit Index (CFI) = .98. To further test the equivalence of the factorial solutions in both age-groups, we next hierarchically added invariance constraints to Model 1. The series of nested models tested was as follows:

- Model 2:* Factor correlation fixed to zero in both age-groups.
- Model 3:* Factor correlation fixed to zero in both age-groups; factor loadings fixed to be invariant across age-groups.
- Model 4:* Factor correlation fixed to zero in both age-groups; factor loadings and factor variances fixed to be invariant across age-groups.

Adding the invariance constraints in Models 2 and 3 did not significantly decrease the goodness of model fit compared to the less constrained models,  $\Delta\chi^2(df = 2) = 4.89$ ,  $p > .05$ ; and  $\Delta\chi^2(df = 4) = 7.20$ ,  $p > .05$ , respectively. Only when additionally constraining the factor variances to be equal across age-groups (Model 4) did we obtain a significantly worse goodness of fit than Model 3,  $\Delta\chi^2(df = 2) = 6.97$ ,  $p < .05$ ; the factor variances were larger in the older subsample. Accordingly, Model 3 represents the data best,  $\chi^2(df = 24) = 37.61$ ,  $p = .04$ , RMSEA = .06, CFI = .97. That is, the structure of two distinct factors obtained in Study 1, one representing interference, the other representing facilitation among goals, was confirmed in Study 2. This structure was highly equivalent across the younger and older subsamples. Table 3 shows the estimated factor loadings for this model.

#### ASSOCIATIONS BETWEEN INTERGOAL FACILITATION AND INTERFERENCE AND SUBJECTIVE WELL-BEING

Table 4 shows that Study 2 replicated the differential pattern of associations with subjective well-being (again, there were no significant interference-by-facilitation interactions at the .05 level): Intergoal facilitation was not predictive of any of the four well-being indicators. In contrast, interference among personal goals was nega-

**TABLE 3: Confirmatory Factor Analysis in Study 2: Estimated Factor Loadings in the Final Model (Standardized Solution)**

Indicator	Interference		Facilitation	
	Younger	Older	Younger	Older
Energy constraints	.90	.91	—	—
Financial constraints	.53	.57	—	—
Time constraints	.95	.98	—	—
Incompatible strategies	.62	.65	—	—
Strategy overlap	—	—	.90	.88
Instrumental relations	—	—	.90	.88

**TABLE 4: Predicting Facets of Subjective Well-Being in Study 2: Results of Multiple Regression Analyses**

Dependent Variable	Independent Variables		Multiple R
	Facilitation	Interference	
Positive psychological functioning	.11	-.23**	.26**
Habitual positive affect <sup>a</sup>	.06	-.20*	.21*
Habitual negative affect	.01	.25**	.25**
Life satisfaction	.00	-.20*	.20

a. Significant age-group interaction ( $p = .02$ ). Younger subsample: facilitation  $\beta = -.01$ , interference  $\beta = -.00$ , multiple  $R = .01$ . Older subsample: facilitation  $\beta = -.05$ , interference  $\beta = -.41^{**}$ , multiple  $R = .41^*$  (see Note 4).  
 \* $p < .05$ . \*\* $p < .01$ .

tively associated with all well-being facets. The size of these associations was relatively small ( $.20 \leq \text{multiple } R \leq .26$ ). As in Study 1, the more intergoal interference participants reported, the less their subjective well-being was.<sup>4</sup>

ASSOCIATIONS BETWEEN EXERCISE-SPECIFIC INTERGOAL FACILITATION AND INTERFERENCE AND EXERCISE ADHERENCE

Are the degrees to which people evaluate their exercise goal as interfering with, and being facilitative for, their other goals (and vice versa) related to their exercise adherence? If so, do these effects change over time? To aggregate indicators of exercise-specific evaluations of intergoal facilitation and interference, we included only IRQ items involving comparisons of the exercise goal with the other three goals (exercise-specific facilitation:  $M = 2.90$ ,  $SD = .88$ ; exercise-specific interference:  $M = 2.09$ ,  $SD = .54$ ). We then used these indicators as predictors of the participants' exercise adherence in each of the 5 months of the study interval. Again, there were no significant facilitation-by-interference interactions ( $p > .05$ ), and the pattern of results was the same for the younger and the older participants. In the first 3 months,

exercise-specific facilitation and conflict did not significantly contribute to the predictions of the participants' exercise adherence (Month 1: multiple  $R = .15$ ,  $p > .05$ ; Month 2: multiple  $R = .10$ ,  $p > .05$ ; Month 3: multiple  $R = .20$ ,  $p > .05$ ). In Months 4 and 5, however, we replicated the differential association pattern of Study 1. Exercise-specific intergoal facilitation, but not exercise-specific intergoal interference, contributed significantly to the prediction of the participants' exercise frequency. Participants exercised more frequently the more exercise-specific facilitation they had reported at T1 (Month 4: facilitation  $\beta = .25$ ,  $p < .05$ , interference  $\beta = -.19$ ,  $p > .05$ ; Month 5: facilitation  $\beta = .26$ ,  $p < .05$ , interference  $\beta = -.12$ ,  $p > .05$ ). The size of these associations was relatively small (Month 4: multiple  $R = .31$ ,  $p < .01$ ; Month 5: multiple  $R = .28$ ,  $p = .05$ ).

Summary of Study 2

Study 2 replicated the main findings of Study 1. Confirmatory factor analyses showed that intergoal facilitation and interference are distinct characteristics. As in Study 1, these characteristics were differentially related to subjective well-being and goal pursuit. Intergoal interference, but not facilitation, was associated with impairments in psychological well-being. Intergoal facilitation, but not interference, was associated with higher exercise adherence in the 4th and 5th (but not in the earlier) months of the study interval. Mutual facilitation among goals thus appears to play a role in the longer term persistence in goal pursuit.

STUDY 3

In Study 3, we used a diary method to obtain day-to-day measures of well-being and goal pursuit. The purposes were to maximize ecological validity (by obtaining reports of the participants' experiences in their everyday environment) and to minimize response biases (by obtaining these reports very shortly after the experiences occurred).

One aim of Study 3 was to investigate the associations between these everyday reports of well-being and goal pursuit on one hand and intergoal facilitation and interference as assessed with the IRQ before the completion of the diaries on the other. A second aim was to investigate the significance of intergoal relations for within-person fluctuations in subjective well-being. In Studies 1 and 2, we studied subjective well-being in traitlike terms. From the standpoint of the individual, however, the extent to which one's well-being fluctuates from situation to situation may be equally important (Reis, Sheldon, Gable, Roscoe, & Ryan, 2000). In Study 3, we therefore conducted within-person analyses controlling for trait differences in emotional well-being to investigate whether variations in people's momentary emotional



well-being are associated with concurrent experiences of conflict among motivational tendencies and of mutual facilitation among goals.

### Method

#### PARTICIPANTS

A subsample of 81 participants of Study 2 agreed to participate in Study 3 ( $n = 52$  younger adults aged 20.1 to 35.4 years,  $M = 25.9$ ;  $n = 29$  older adults aged 58.9 to 78.1 years,  $M = 64.3$ ). Of these participants, 72.8% were women.

#### PROCEDURE

Study 3 started with an instruction session in which participants were familiarized with the procedure and materials. These sessions took place shortly after T1 of Study 2 ( $M = 8.67$  days,  $SD = 7.75$ ) in which personal goals had been elicited and intergoal facilitation and interference had been assessed.

Participants kept nine diaries during three diary periods of 3 consecutive days. Intervals of 6 days separated the three diary periods. The first diary period started on the day following instruction. Diary periods covered a total of 6 weekdays (Monday through Friday) and 3 weekend days (Saturday or Sunday). The purpose of distributing the 9 diary days throughout 3 weeks and across different days of the week was to cover the diversity of people's everyday life.

Each diary consisted of three entries to be completed at noon, at 6:00 p.m., and immediately before going to bed. Participants received a portable alarm clock to ensure punctual completion. They also received nine prestamped return envelopes and were instructed to mail each diary on the day after its completion. To minimize missing data, participants completed an additional diary for each incomplete diary they provided. Sixteen participants kept one, 4 participants kept two, and 2 participants kept three additional diaries. With the exception of 1 participant who discontinued participation after completion of the first diary period, no participants dropped out. Participants were reimbursed DM 145 (approximately \$65).

#### INSTRUMENTS

*Intergoal relations.* At T1 of Study 2, all participants had responded to the IRQ (facilitation composite:  $M = 3.02$ ,  $SD = .85$ , Cronbach's  $\alpha = .91$ ; interference composite:  $M = 2.21$ ,  $SD = .56$ , Cronbach's  $\alpha = .94$ ). The correlation between the IRQ facilitation and interference composites was not significant ( $r = .16$ ,  $p > .05$ ) and not significantly different between both age-groups ( $p > .05$ ).

*Everyday emotional well-being.* Each of the three diary entries per day consisted of two parts. In the first part, participants rated their positive and negative affect during the preceding hours (i.e., since waking up for the first, and since the last diary entry for the second and third diary entries) on 5-point rating scales using the short (i.e., 12-item) version of the Multidimensional Affect Rating Scale (Steyer et al., 1997). These affect ratings came first in order to reduce the possibility that they would be affected by completing the other part of the diary entry (negative affect:  $M = 2.07$ ,  $SD = .51$ ; positive affect:  $M = 3.14$ ,  $SD = .34$ ).

*Everyday engagement in goal pursuit.* The second part of each diary entry requested a chronological report of the activities in which participants had been engaged during the preceding hours. For each reported activity, participants indicated, separately for each of the four goals elicited at T1, how relevant the activity had been for that goal. Responses ranged from 0 (*activity did not further that goal*) to 3 (*activity very much furthered that goal*). Averaging these ratings across all activities and goals yielded an indicator of the participants' overall engagement in goal pursuit ( $M = .69$ ,  $SD = .65$ ).

*Momentary experience of intergoal facilitation.* If the same activity was rated as simultaneously furthering more than one goal, we considered this an expression of the momentary experience of intergoal facilitation. To quantify this, we determined, for each reported activity, how many of the six possible combinations of two goals had been rated as being simultaneously furthered by that activity and divided their total in a given diary entry by the number of activities reported. This indicator of momentary intergoal facilitation, when averaged across all diary entries ( $M = .06$ ,  $SD = .07$ ), showed a substantial positive correlation with the intergoal facilitation composite of the IRQ assessed at T1 ( $r = .67$ ,  $p = .00$ ).

*Momentary experiences of interference between motivational tendencies.* For each reported activity, participants indicated whether they would have liked to do or ought to have done something else instead. We included these items as a measure of the momentary experience of interference between motivational tendencies. In day-to-day life, interference among goals results in the occurrence of different motivational tendencies (e.g., to study for an exam and to visit a friend) that cannot be yielded to simultaneously (either because of resource constraints or because of incompatible goal attainment strategies), so that one tendency has to be currently given priority. In such situations, people are likely to experience that they would want to do something else (e.g., because that would be more pleasant) or that they ought to do

something else (e.g., because that would be more responsible). We created a dichotomous variable for each diary entry indicating the occurrence of at least one endorsement of wanted *or* ought to do something else. Note that this indicator is more general than the intergoal interference measure of the IRQ because it is not specifically related to the four goals under study. When averaged across all diary entries ( $M = .05$ ,  $SD = .05$ ), however, it correlated significantly positively with the intergoal interference composite of the IRQ assessed at T1 ( $r = .31$ ,  $p < .01$ ). We therefore regarded this a useful first approximation of the experience of interference among motivational tendencies in everyday life.

### Results

We conducted analyses on two levels of data aggregation. At the first level, the unit of analysis was the person. Momentary reports of the participants' emotional well-being and goal pursuit were averaged across the entire diary study. The question of interest was whether these averages, indicating the habitual tendencies to experience positive and negative affect in everyday life and to engage in goal pursuit, were associated with the levels of initially (i.e., at T1) reported intergoal facilitation and interference.

At the second level, the unit of analysis was the single diary-entry report covering a period of a few hours. Here, the question of interest was whether the momentary experience of motivational conflict and of intergoal facilitation during the time period covered by a single diary entry was predictive of within-person fluctuations (above and below the personal average) in the intensity of positive and negative affect experienced during that time.

*Analyses at the person level: Facilitation and interference among goals, emotional well-being, and goal pursuit in everyday life.* We predicted the participants' average emotional well-being and average involvement in goal pursuit using intergoal facilitation and interference (measured at T1) as independent variables. Again, there were no significant age-group interactions and no interference-by-facilitation interactions ( $p > .05$ ). The differential association patterns observed in the other two studies were replicated in two of the three analyses.

As in the other two studies, the only significant predictor of average negative affect (averaged across all time points) was intergoal interference. The more interference among their goals participants had reported at T1, the more intense negative affect they reported during the subsequent diary phase ( $\beta = .41$ ,  $p < .01$ ). Intergoal facilitation did not contribute significantly to this prediction ( $\beta = -.16$ ,  $p > .05$ ). The size of this association was moderate (multiple  $R = .47$ ,  $p < .01$ ).

In the prediction of average positive affect (averaged across all time points), however, both intergoal interference and intergoal facilitation turned out to be significant and about equally relevant predictors. The less intergoal interference and the more intergoal facilitation participants had reported at T1, the more intense positive affect they reported during the subsequent 3 weeks (interference  $\beta = -.24$ ,  $p < .05$ ; facilitation  $\beta = .23$ ,  $p < .05$ ; multiple  $R = .36$ ,  $p < .01$ ).

Consistent with the other two studies, intergoal facilitation was the only significant predictor of the participants' average engagement in goal pursuit (averaged across all time points). The more intergoal facilitation people had reported at T1, the more they were involved in activities furthering their goals during the 3 weeks of the subsequent diary phase ( $\beta = .39$ ,  $p < .01$ ). Intergoal interference did not contribute significantly to this prediction ( $\beta = -.16$ ,  $p > .05$ ). Again, the size of this association was moderate (multiple  $R = .45$ ,  $p < .01$ ).

*Analyses at the diary-entry level: Do momentary experiences of motivational conflict and of facilitation among goals predict within-person fluctuations in positive and negative affect?* The analyses described above showed that the general assessment of the nature of intergoal relations with the IRQ is associated with people's traitlike (i.e., average) tendency to experience positive and negative affect. Do similar associations also become evident in the momentary experiences of people's everyday lives? Are everyday experiences of motivational conflict, such as the feeling that one wants or ought to do something else, associated with oscillations of emotional well-being above and below the individual's average? And what about everyday experiences of intergoal facilitation, such as the feeling that one does something that furthers several goals at once?

The available data had two characteristics with implications for appropriate data analysis: (a) The data structure was hierarchical with, on average, 27 repeated diary entries nested within participants; and (b) the time intervals between diary entries were not equal (because diaries were kept during three periods of 3 consecutive days that were interspersed with breaks of 6 days). To accommodate for this nested design, we used multilevel regression models fitting a time-series type covariance structure appropriate for unequally spaced repeated measures. Specifically, we used SAS PROC MIXED and restricted maximum likelihood to fit the spatial power law covariance structure to the data. Using spatial power law, a continuous "time-in-study" variable references measurement times. We defined the scale of this variable such that each day of the entire diary study (including breaks) represented three units.

Conceptually, multilevel regression models represent hierarchical systems of regression equations, which in

**TABLE 5: Predicting Within-Person Fluctuations in Emotional Well-Being in Study 3: Results of Multilevel Regression Analyses**

Predictor	Short-Term Positive Affect	Short-Term Negative Affect
Fixed part <sup>a</sup>		
Intercept	3.04 (.02)**	2.16 (.02)**
Situational facilitation	0.07 (.05)	-0.05 (.05)
Situational conflict: yes	-0.18 (.03)**	0.16 (.03)**
Mean positive affect <sup>b</sup>	1.00 (.05)**	—
Mean negative affect <sup>b</sup>	—	0.95 (.03)**
Random part <sup>c</sup>		
Intercept	.00	.00
SP (POW) <sup>d</sup>	0.29 (.02)**	0.34 (.02)**
Residual	0.34 (.01)**	0.34 (.01)**
Modeled variance (within persons) <sup>e</sup>		
	7.78%	8.95%

NOTE: SP (POW) = spatial power law.

a. Unstandardized regression coefficients (standard error).

b. Within-person mean across all diary entries.

c. Estimated variance components (standard error).

d. Autoregressive parameter: estimated covariance of two adjacent diary entries in the same diary period.

e. Proportional reduction in the variance component *residual* (unexplained within-person variation) in comparison to unconditional means models (i.e., models without the explanatory variables). Note that between-person variation is perfectly accounted for by introducing within-person mean of positive and negative affect as predictor variables.

\*\* $p < .01$ .

our case express the dependent variables (i.e., momentary positive and negative affect) using a pair of linked models, one at the diary entry level and one at the person level. At the diary entry level, we predicted the momentary positive and negative affect using momentary conflict (occurrence of the feeling that one wanted or ought to do something else) and momentary facilitation (extent to which one's activities furthered several goals at once) as predictor variables. There was no significant conflict-by-facilitation interaction ( $p > .05$ ). Intercept (i.e., the person's average positive or negative affect) and slopes (i.e., strength of the relations of momentary conflict and facilitation to momentary positive or negative affect) were initially assumed to vary across individuals (i.e., to be random rather than fixed effects). We accounted for the between-person variation in the intercept by introducing the within-person mean of momentary positive or negative affect (averaged across all diary entries) as a person-level predictor of the random intercept. Using the likelihood ratio test on the change in deviance (Littell, Milliken, Stroup, & Wolfinger, 1996), we also tested whether fixing the slopes of momentary conflict and facilitation (i.e., assuming that they are the same for all participants) significantly decreased the goodness of model fit. This was not the case. That is, the

respective associations did not vary significantly across participants. Table 5 shows results of the final models.

As in Studies 1 and 2, a differential association pattern evolved. The momentary experience of intergoal facilitation (i.e., the experience that one's activities furthered several goals simultaneously) was not predictive of fluctuations in concurrent positive and negative affect. The experience of conflicting motivational tendencies (i.e., the experience that one wants or ought to do something else), however, was predictive of these fluctuations. Participants tended to experience less-than-average positive and more-than-average negative affect in diary-entry periods where they had at least once wanted or ought to do something else when compared with diary-entry periods where no such motivational conflict experiences had occurred (accounting for 8% and 9% of within-person variance in momentary positive and negative affect, respectively).

### Summary of Main Results in Study 3

Study 3 showed that interference and mutual facilitation among goals tend to have different functions in the regulation of people's day-to-day well-being. At the person level of analysis, the more interference among their goals participants had reported at T1, the more intense negative affect they tended to report in their diaries. In the prediction of the participants' average positive affect, however, both intergoal interference and facilitation turned out to be about equally relevant predictors.

A differential association pattern also emerged at the level of the single diary entries investigating within-person fluctuations in emotional well-being. Only the occurrence of momentary motivational conflict experiences (and not the momentary experience of intergoal facilitation) was predictive of a relative decline in momentary positive affect and a relative increase in momentary negative affect (relative to the within-person average).

Also consistent with the other studies, Study 3 demonstrated that interference and mutual facilitation among personal goals have different functions for people's day-to-day engagement in goal pursuit. Again at the person level of analysis, only intergoal facilitation was predictive of the participants' average involvement in goal pursuit. The more mutual facilitation participants had reported at T1, the more they were involved in activities furthering their goals.

### DISCUSSION

The present studies support a conceptualization of facilitation and interference among personal goals as two independent goal dimensions. In all three studies, facilitation and interference emerged as two independent factors. Maybe more important, facilitation and

interference among personal goals differentially predicted psychological well-being and goal pursuit. Below, we discuss this differential pattern of associations in more detail. First, however, we briefly address the distinctiveness of intergoal facilitation and interference.

#### *Distinctiveness of Intergoal Facilitation and Interference*

Previous research on intergoal relations has employed assessment methods that either exclusively focused on interference among goals (and left the possibility of mutual facilitation unattended) or that assessed intergoal facilitation and interference on bipolar, unidimensional response scales. The latter assumes that interference and facilitation among goals should be treated as mutually exclusive opposites.

In contrast to this assumption, we proposed that intergoal facilitation and interference are more adequately conceptualized as two distinct dimensions. The nature of intergoal relations evolves in situations and depends on the person's behavior. It is possible (although not necessarily the case) that there are behaviors and situations in which two or more of an individual's goals interfere and others in which these goals mutually facilitate each other.

We investigated this prediction using the IRQ. Different from previous assessment approaches, the IRQ assesses specific forms of intergoal interference (i.e., resource constraints and incompatible goal attainment strategies) and intergoal facilitation (i.e., instrumental goal relations and overlap in goal attainment strategies). This empirical separation of interference and facilitation among goals allows for the empirical test of their association. Furthermore, whereas previous assessment methods left it to the participants to decide on which criteria to base their judgment, the IRQ explicitly specifies the reference standards, thereby enhancing the interindividual comparability of responses.

The psychometric properties of the IRQ warrant its application as a research instrument. The instrument's two-factor structure confirmed our prediction that intergoal facilitation and interference should be regarded as distinct characteristics rather than as opposites on a single dimension.

#### *Intergoal Relations and Subjective Well-Being*

The research presented demonstrates a differential pattern of associations between intergoal facilitation and interference and psychological well-being. Intergoal facilitation is not predictive of a person's psychological well-being. In contrast, intergoal interference is associated with impairments in a variety of psychological well-being facets (e.g., positive psychological functioning, life satisfaction, affective well-being). This

pattern showed throughout the three studies presented. Only 1 of 10 analyses showed an exception to this overarching pattern. In Study 3, both facilitation and interference were predictive of the participants' average positive affect. The observed positive association with intergoal facilitation, which deviated from the findings in the other analyses, however, was small.

Study 3 demonstrated similar differential associations in people's day-to-day experiences. Everyday experiences of motivational conflict, that is, the feeling that one wants or ought to do something else instead of what one is doing, account for fluctuations of people's momentary emotional well-being below their personal average. In contrast, everyday experiences of intergoal facilitation, that is, the experience that one does something that furthers several goals at once, do not play a role in this respect.

Why are intergoal facilitation and interference differentially related to a person's subjective well-being? The present study leaves this question open to future research. Our interpretation is that interference among one's goals implies that the attainment of one or more goals is threatened. This threat might be considerably more aversive than the experience of intergoal facilitation is attractive (see also Hobfoll, 1998; Kahneman & Tversky, 1984). Experiencing interference among goals as aversive may serve the function of directing people's attention to the problem and of motivating them to solve it. Indeed, Emmons and King (1988) found that people tend to ruminate about highly interfering goals (assessed with a bipolar scale). As long as the interference among one's goals persists, this rumination, in turn, might contribute to the impairment of one's subjective well-being (McIntosh, 1996).

The observed differential association pattern may resolve the inconsistency of previous results about the association between intergoal relations and psychological well-being. Studies applying unipolar assessment methods found that intergoal interference is associated with lower psychological well-being. This is consistent with the findings of the present studies. In contrast, studies applying bipolar scales did not observe such an association or reported inconsistent results. In light of the finding that intergoal interference and facilitation should be regarded as distinct characteristics, our findings suggest that this inconclusive picture may be a consequence of the confounded assessment of intergoal interference (which is negatively related to well-being) and of intergoal facilitation (which is not related to well-being) in bipolar instruments.

#### *Intergoal Relations and Goal Pursuit*

The present studies demonstrated a differential association pattern between intergoal relations and people's



involvement in goal pursuit. Intergoal interference is not predictive of a person's involvement in goal pursuit. In contrast, the more mutually facilitative a person's goals are, the more he or she tends to engage in goal-directed actions. This differential association pattern consistently showed throughout the three studies, which used different methods for the assessment of goal pursuit (i.e., questionnaires, objective behavioral information, diaries).

Study 2 further showed that the association between intergoal facilitation and goal pursuit may emerge only after some time. It thus may be particularly the *long-term* persistence in goal pursuit that is enhanced by a high degree of intergoal facilitation.

These findings underscore that intergoal interference and facilitation appear to be functionally distinct properties of intergoal relations. Theoretical approaches to the implementation of goal-directed activities would benefit from incorporating the notion of facilitative intergoal relations. So far, research attempting to explain differences in goal-directed activities in terms of the nature of intergoal relations has exclusively focused on the role of negative (i.e., conflictual) relationship qualities (Emmons & King, 1988; Emmons, King, & Sheldon, 1993; Gebhardt, 1997; Gebhardt & Maes, 1998; Maes & Gebhardt, 2000; McKeeman & Karoly, 1991).

Several open questions arise from the observed association pattern. One pertains to the underlying mechanisms. A possible explanation is that mutual facilitation among goals enhances goal-directed activities by allowing an efficient utilization of one's (limited) resources in the interest of one's goals. Facilitative goals can be pursued simultaneously with little or no additional effort. This may be particularly important for the long-term maintenance of goal-pursuit behaviors even in the context of new situations, demands, or interests.

Why does interference among goals play a less important role? Our interpretation is that people may mobilize effort and other resources to compensate for interference among their goals. Let us take the goals *getting a 3.0 GPA* and *keeping up on the chores* cited by Emmons et al. (1993, p. 535) as examples. One might sleep less in order to have more time to engage in the accomplishment of both goals. Intergoal interference, then, might not be reflected in fewer goal-pursuit activities (but could well have long-term health implications; see also Emmons & King, 1988). In situations of very severe resource limitations or when the person perceives a goal not to be "worth" the effort, however, he or she might not engage in such compensatory efforts. In such situations, interference among goals may lead to an inhibition of goal-directed activities, very likely at the cost of the comparatively least important goal(s). This might explain why

Gebhardt and colleagues (Gebhardt, 1997; Gebhardt & Maes, 1998) and McKeeman and Karoly (1991) observed a negative association between intergoal interference and particular health behavior goals (exercising and smoking cessation, respectively). These health behavior goals might have been comparatively less important to the participants than their other goals. Consequently, they may have been more likely to disengage from these health behaviors in the interest of pursuing their other goals than to mobilize more resources to realize all goals despite their interference.

#### Limitations

The reported studies investigated samples of younger and older adults. Future research will have to investigate whether the observed findings also apply to other age-groups. Furthermore, the samples were predominantly female. Although there were no gender differences in the reported findings, future research should aim at recruiting representative samples with a balanced gender distribution. Finally, in Study 3, our possibilities to control whether participants adhered to the prescribed diary entry times were limited. Being late in completing diary entries may have resulted in retrospective memory bias. Using hand-held computers or other electronic devices for data collection in future studies would allow control over this potential problem.

#### Summary

In sum, three studies using different methods and designs yielded two main results. First, we found that interference and facilitation among personal goals should be treated as distinct characteristics of intergoal relations rather than as opposites on the same dimension. Second, intergoal facilitation and interference tend to be differentially related to psychological well-being and involvement in goal pursuit. Intergoal interference, rather than intergoal facilitation, is associated with impairments in psychological well-being. In contrast, intergoal facilitation, rather than intergoal interference, is associated with an enhanced engagement in goal pursuit activities.

#### NOTES

1. Pals and Little (1983) employed an instrument that allowed for a goal to both interfere with and facilitate another goal but only reported analyses involving a unipolar index of interference.

2. In all three studies, we adjusted occasional univariate outliers to the closest nonoutlying value and used transformations to symmetrize occasional data distributions departing from normality. Note, however, that these transformations did not alter the pattern of results.

3. To avoid identification problems due to the fact that there were only two indicators of the facilitation factor, we constrained the error variances of these two indicators to be equal. This was appropriate because the variable variances within age-groups were about equal.

4. With one exception, there were no significant age-group interactions in these associations. The exception involved the prediction of habitual positive affect. Conducting multiple regression analyses separately in both age-groups revealed that the differential association pattern with positive affect held in the older, but not in the younger, subsample (see Table 4).

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