Pursuing Personal Goals: Skills Enable Progress, but Not All Progress Is Beneficial

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Although goal theorists have speculated about the causes and consequences of making progress at personal goals, little longitudinal research has examined these issues. In the current prospective study, participants with stronger social and self-regulatory skills made more progress in their goals over the course of a semester. In turn, goal progress predicted increases in psychological well-being, both in short-term (5-day) increments and across the whole semester. At both short- and long-term levels of analysis, however, the amount that well-being increased depended on the "organismic congruence" of participants' goals. That is, participants benefited most from goal attainment when the goals that they pursued were consistent with inherent psychological needs. We conclude that a fuller understanding of the relations between goals, performance, and psychological well-being requires recourse to both cybernetic and organismic theories of motivation.

his article explores the causes and consequences of making progress at personal goals. To this end, we draw from two distinct perspectives on motivation and personality. First, cybernetic (e.g., Carver & Scheier, 1981, 1990) and cognitive-behavioral theories (e.g., Bandura, 1989a; Locke & Latham, 1990) of motivation are employed to consider how goal progress occurs. We attempt to show that people with stronger life skills do better in their semester-long goals and, further, that life skill measures yield predictive information that is not supplied by knowledge of peoples' initial expectancies regarding, and/or commitment to, their goals. Second, organismic theories of motivation (e.g., Deci & Ryan, 1985; Rogers, 1963) are employed to consider how progress affects well-being. We attempt to show that goal progress best

promotes increased well-being when progress is made at goals that are "congruent" (Sheldon & Kasser, 1995) with presumed inherent psychological needs.

How does progress occur? To move toward a particular goal, a series of smaller steps is usually necessary, requiring diverse combinations of skills and abilities (Cantor & Kihlstrom, 1987). For example, a student's goal of "getting a 4.0 grade point average (GPA) this semester" is likely helped by the ability to concentrate when necessary, the ability to delay gratification, the ability to follow instructions, and even the ability to create rapport with potential study partners. The idea that expertise in different ability domains help people take the specific steps required to achieve goals is basic to cybernetic models of self-regulation (Carver & Scheier, 1981; Hyland, 1988; Powers, 1973). According to these models, an action system is optimally configured when purposes at higher levels of the system are readily served by behavioral competencies at lower levels of the system. Such vertical "coherence" (Little, 1989; Sheldon & Kasser, 1995) presumably allows people to reduce discrepancies between actual and desired states of affairs and thus to make progress at their goals.

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and adults has demonstrated that people who are oriented toward extrinsic goals evidence greater psychological maladjustment, whereas being oriented toward intrinsic goals has been associated with greater well-being (Kasser & Ryan, 1993, 1996). These differences in wellbeing are assumed to result because intrinsically oriented individuals obtain more experiences satisfying of their psychological needs, whereas extrinsically oriented people, who tend to ignore or be out of touch with their needs, have unsatisfying experiences characterized by pressure, tension, and irritation.

Sheldon and Kasser (1995) introduced the concept of organismic congruence to capture the idea that both the reasons one pursues goals (autonomous vs. controlled) and the content of one's goals (intrinsic vs. extrinsic) are important for understanding the relationship between goals and psychological well-being. In two cross-sectional studies, they showed that people who strive for more autonomous reasons or whose strivings are taking them toward intrinsic possible futures scored higher on many different trait indices of health and adjustment, including self-actualization, openness to experience, empathy, and self-esteem. In the current longitudinal study, we examine whether the congruence concept is also relevant to understanding how people make positive changes in their well-being. We propose that when people make short-term progress in congruent goals, they satisfy psychological needs, which in turn leads them to experience enhanced daily well-being. By the same reasoning, we assume that when people make sustained progress in congruent goals, they come to experience enhanced general well-being. To examine these predictions, we tested the main and interactive effects of progress and congruence on changes in wellbeing, at both short-term and long-term levels of analysis.

Summary of hypotheses. First, we expected that individuals with higher expectancies and a greater expectancyvalue product for their projects would make more progress over the semester. This finding would replicate prior research showing that goal-specific beliefs affect goal attainment. Second, we hypothesized that measures of peoples' life skills would predict progress over and above the effects of the expectancy and value constructs. This finding would suggest that our understanding of how people achieve goals can be enhanced by considering their general behavioral competencies as well as their goal-specific beliefs. Third, we expected to replicate Brunstein's (1993) longitudinal finding that goal progress leads to enhanced well-being. However, we extended this research by testing the hypothesis both in the short-term (i.e., changes in daily well-being, assessed every 5 days) and at a statistically orthogonal long-term level of analysis (i.e., changes in monthly well-being from

the beginning to the end of the semester). Fourth, we hypothesized that the progress-to-increased-well-being effect would be moderated by the organismic congruence, or need consistency, of the goals in which participants make progress. This finding would suggest that the effect of goal progress on well-being may depend on both the why and the what of goals (Ryan et al., 1996) (i.e., it may be that not all progress is beneficial). As stated previously, we tested this hypothesis at both a short-term and a statistically orthogonal longer-term level of analysis.

METHOD

Participants 1 4 1

Participants were students in a social psychology course at the University of Rochester who were offered extra course credit; 154 students began the study. However, 53 students who filled out the initial packet did not complete the demanding diary portion of the study (described later in this article), and an additional 11 students were eliminated from the sample because of missing peer-report data. Thus, the final sample consisted of 90 students (24 males and 66 females). Their mean age was 20 years.

t tests were conducted on all variables collected at the beginning of the study to determine whether the 64 participants not included in the final sample differed from the 90 participants who completed the study. No differences emerged between the two groups for any of the initial project or well-being variables. However, there was a difference on 1 of the final set of 10 life skills studied—interestingly, dropouts were significantly lower in the ability to budget time. This fact may somewhat limit the generalizability of our findings.

Procedure

In early October a brief in-class introduction to the study was given. The study was described to participants as a semester-long research project concerning motivation and emotion in everyday life. Interested participants were given a questionnaire booklet to take home and return within 10 days. This October booklet included measures of participants' personal projects, life skills, and initial general well-being (all of which are described in more detail later in this article). When they returned the booklet, participants were given five scaled envelopes and asked to give or mail them to "people who know you." Each envelope contained a cover letter and a short questionnaire asking the respondent to rate the participant's life skills and his or her general positive and negative affect (Watson, Tellegen, & Clark, 1988). As an incentive, the cover letter promised that 20 respondents would be randomly chosen to receive a \$10 cash award.

TABLE 1: Loadings of the 10 Retained Life-Skill Variables on the Two Primary Factors

Ability to	Factor 1 Social Skills	Factor 2 Self-Regulatory Skills		
Create rapport with others	.83	12		
Express myself and				
communicate effectively	.78	.13		
Perceive social norms	.63	03		
Use my emotions as information about the				
current situation	.61	.32		
Be assertive when necessary	.51	03		
Adopt different roles as				
situations require	.50	04		
Forgo immediate gratification for				
long-term rewards	.08	.80		
Conceive of an appropriate plan to				
attain my goals	.08	.75		
Concentrate				
, when necessary	08	.71		
Budget my time				
effectively	.12	.62		

congruence with organismic needs and growth tendencies. The fact that the two constructs were significantly correlated (r=.32, p<.01) further supports this assumption.

We also assessed several of participants' initial beliefs regarding their projects. First, participants rated their sense of self-efficacy regarding each project (i.e., "the extent you feel you have the skills and resources necessary to attain the project") using a scale ranging from 1 (very little efficacy) to 9 (very much efficacy). We based this measure on Bandura's (1989b) suggestion that goal efficacy involves positive judgments regarding one's ability to attain goals. An aggregate expected efficacy variable was created from these ratings by summing across the five projects ($\alpha = .75$). To derive a measure of how much participants valued their projects, we also asked participants "how committed do you feel to each of your five projects?" and asked them to respond using a scale ranging from 1 (not at all committed) to 9 (extremely committed). We summed across these five ratings to obtain an aggregate measure of commitment ($\alpha = .80$). Finally, we asked participants to rate the difficulty of each goal on a 1 (very easy) to 9 (very difficult) scale and then created an aggregate difficulty variable in the same way as previously discussed ($\alpha = .72$). The difficulty data were collected for use as a covariate to help ensure that results hold for people of all levels of ambition.

Life skills. In the October packet, participants were also presented with a set of 20 skills, "some of which you are probably quite good at, and some of which you may not be so good at." As mentioned above, these skills were

adopted from a variety of sources, including studies of implicit theories of intelligence (Sternberg et al., 1981), social or pragmatic intelligence (Cantor & Kihlstrom, 1987), and goal-relevant personal resources (Diener & Fujita, 1995). Participants rated how much they possessed each of the 20 skills relative to other University of Rochester undergraduates. The scale ranged from 1 (much less than average) to 5 (about average) to 9 (much more than average). Participants' peers also rated the participants on the same set of 20 life skills, thinking of how you see them, not necessarily how they see themselves." The 20 peer-rated skill variables were created by averaging the reports supplied by peers.

To examine the convergence of the self-rated and peer-rated skill measures, each of the peer-rated skill variables was correlated with the corresponding selfrated skill variable. These 20 correlations ranged from .04 to .58 and were significantly or marginally significantly correlated in 13 out of 20 cases (mean τ = .22). To reduce the data and use all available information, we averaged the peer-rated and self-rated scores for each of the 20 skills and then subjected the resulting 20 variables to a principal components factor analysis using varimax rotation. Two primary factors emerged, accounting for 22% and 15% of the variance, respectively. Five smaller factors emerged, all with eigenvalues of less than 1. Essentially the same two primary factors emerged when the peer- and self-rated skill variables were analyzed separately, prior to averaging.

Of the 20 averaged skill variables, 10 loaded most strongly on one or the other of the first two factors. These 10 skills, and their loadings on the two factors, are given in Table 1. Examination of the pattern of loadings suggested naming the two factors Social Skills and Self-Regulatory Skills; they correspond reasonably well with the basic distinction between social and formal intelligence advocated by some psychologists (see Cantor & Kihlstrom, 1987). Given their interpretability and their prominence via scree test, we decided to focus on these two factors and the 10 skills that defined them. Thus, for each participant, a score was created on each of the two factors by summing together the appropriate skill scores (using unit weighting).

Coefficient alpha was .72 for the 6-item social skills variable and was .71 for the 4-item self-regulatory skills variable. The intercorrelation of the two skill variables was r=.15, ns, suggesting that they are relatively independent dimensions of competence. To examine the degree of convergence of peer- and self-report information regarding these two summary factor scores, we computed social and self-regulatory skills variables separately for the peer-report and self-report data, on the basis of the factor analyses reported previously. Peer-rated and self-rated social skills were significantly corre-

TABLE 3: Intercorrelations of All Major Study Variables

	1	2	3	4	5	6	7	8	9
1. Project self-determination									
2. Project intrinsic orientation	.32***								
3. Commitment	.29***	.20*							
4. Expectancy	.23**	.13	.66***						
5. Difficulty	.06	13	.26**	.10					
6. Social skills	17*	-11	.12	.32***	24				
7. Self-regulatory skills	.24**	.01	.25**	.19*	04	.15			
8. Semester progress	.02	.07	.13	24**	36	.40***	.21**		
9. October well-being	98+++	.10	29+++	_ 3 7+++	29	.52***	.11	.20*	
10. December well-being	.11	.06	.04	.14	- 29	.06	.02	.34***	.48***

^{*}p<.10. **p<.05. ***p<.01.

Primary Analyses

Predicting semester progress. First, we tested the hypothesis that goal-specific beliefs (initial efficacy-expectations and the Efficacy × Commitment interaction) would predict progress. Expected efficacy was correlated with semester progress (r = .26, p < .05) as predicted; commitment was unrelated. We then used a hierarchical regression to test the hypothesis that these two variables would interact to predict progress. After controlling for the main effects, the product term contributed significant additional variance at Step 2 of the regression $(\Delta R^2 = .097, p < .01)$. Consistent with Brunstein's (1993) results, commitment was more strongly related to progress for participants high in efficacy than for participants low in efficacy.

To examine the second hypothesis, that life skills would also predict progress and would continue to do so even after controlling for the effects of efficacy and Efficacy × Commitment, we conducted the following analyses. First, we found that semester progress was significantly positively correlated with the possession of both social skills (r=.42, p<.01) and self-regulatory skills $(\tau=.21, p<.05)$. We then conducted a regression analysis in which the two skill variables were entered together at the third step of a hierarchical regression, after controlling for expected efficacy, commitment, and their interaction. As a set, the social and self-regulatory skill variables added significant predictive variance at the third step ($\Delta R^2 = .074$, p < .05), as expected. This occurred despite the fact that the variance shared by the skill measures and the expected efficacy measure ($\tau = .19$, p < .10 with self-regulatory skills, and r = .92, p < .01 with social skills) was assigned a priori to expected efficacy. Notably, the skills effect was carried primarily by the social skills variable ($\beta = .28$, p = .01), not the self-regulatory skills variable ($\beta = .11$, p = .27). Additional analyses revealed that the effect of the two skill variables on

progress also remained when the difficulty of participants' projects was first controlled ($\Delta R^2 = .066$, p < .05), indicating that the observed effects held for participants of all levels of ambition.

Predicting changes in well-being. The next series of analyses was designed to test our third prediction that making progress at one's goals leads to enhanced well-being (Brunstein, 1993). We first examined this prediction at the short-term level by testing whether the progress made during a given 5-day period was associated with changes in well-being since the last diary report. Because no baseline data were available for the day that was 5 days prior to the first diary report, the first of the 12 reports was omitted from these analyses. Thus, we created a data file in which 990 short-term periods (90 participants × 11 reports) were the units of analysis rather than the participants themselves. Three hierarchical regressions were then conducted in which short-term positive affect, short-term negative affect, or short-term combined wellbeing was the dependent measure. A set of 89 (i.e., n-1) dummy variables was entered into these regressions to specify and control for person-level effects (West & Hepworth, 1991). This procedure removes all subjectrelated mean differences, thereby centering the data around 0 (Marco & Suls, 1993). Also entered was a variable identifying which of the 11 periods the report fell into, in an effort to remove any time-of-semester effects. In addition, the previous report's positive affect, negative affect, or combined well-being score was entered so that the dependent measure would reflect residual change in well-being at the short-term level. Finally, the period's short-term progress score was entered into the equation after controlling for the variables previously mentioned.

In these analyses, short-term progress was a significant predictor of decreased short-term negative affect ($\beta = -.29$, p < .001), increased positive affect ($\beta = .28$, p < .001),

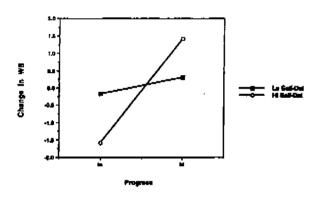


Figure 1 Predicted change in combined well-being scores in standardized units for four hypothetical participants with equal October combined well-being who made low or high amounts of progress in goals low or high in self-determination.

Intrinsic Orientation interaction was a significant predictor of enhanced life satisfaction, positive affect, and combined well-being.³

To make these moderator relationships more concrete, we used a predictor equation (Cohen & Cohen, 1983) to estimate values of December combined well-being for four hypothetical participants who had values at the sample mean for October combined well-being but who made low (I standard deviation below the mean) or high (1 standard deviation above the mean) amounts of progress over the course of the semester and who were also either low or high in the self-determination of the projects that they pursued. Figure 1 presents this relationship for self-determination scores, and Figure 2 presents this relationship for intrinsic orientation scores. As can be seen, these four hypothetical participants, identical in combined well-being in October, would come to feel quite different by the end of the semester. Specifically, those participants with noncongruent goals would maintain about the same level of well-being regardless of how much progress they made. In contrast, those participants who made substantial progress at congruent goals would experience enhanced well-being by December, and those who made little progress at congruent goals would experience reduced well-being. Essentially the same pattern emerged when the four measures that comprise the combined well-being variables were analyzed separately. *

Testing four alternative explanations for the congruence moderation effect. One potential methodological problem with the current study concerns participants who finished projects early in the semester; it is not clear how this would affect their subsequent ratings. In the final packet, we therefore asked participants to identify which

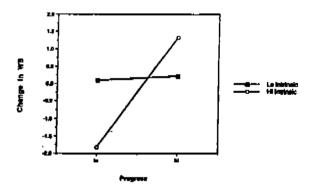


Figure 2 Predicted change in combined well-being scores in standardized units for four hypothetical participants with equal October combined well-being who made low or high amounts of progress in goals low or high in intrinsic orientation.

projects, if any, they felt that they had completed by the end of the semester. On average, participants felt they had completed 1.57 of their 5 projects, with a standard deviation of .57. However, controlling for the number of projects that participants had completed had no effects on any of the results reported previously.

One conceptually based alternative explanation of the congruence moderation effect is that noncongruent goals simply mattered less to participants and, thus, progress (or lack of progress) had less effect on their well-being. This raises the possibility that organismic congruence is reducible to, or is a mere surrogate for, participants' conscious commitment to their projects (Lydon & Zanna, 1990). To examine this possibility, we reconducted the regression analyses presented in Table 5, entering commitment at Step 2 along with either self-determination or intrinsic orientation and semester progress. At Step 3, we entered the appropriate interaction terms. The resulting interaction coefficients were essentially unchanged from those presented in Table 5, suggesting that the moderating effects of congruence do not merely reflect differences in participants' degree of commitment to their projects. The results were also unchanged when the Commitment × Semester Progress interaction was controlled.

Another alternative explanation of our results is that congruent goals are more abstract, difficult, and meaningful (Emmons, 1992), whereas noncongruent goals are more concrete and manageable. The examples of goals low and high on self-determination and intrinsic orientation, given in the Methods section, are consistent with this suggestion. If so, it is possible that the moderating effects of congruence on the progress to increased well-being relationship occur simply because congruent

people to better satisfy their inherent psychological needs (Omodei & Wearing, 1990) and thereby increase their well-being.

This leads us to a perhaps bold speculation, which is consistent with the writings of many theorists. It may be that what has been indirectly measured in the current study is personal growth. It is a sine qua non of organismic theories that need satisfaction affords personal growth and that growth leads to enhanced well-being (Deci & Ryan, 1985; Maslow, 1971; Ryff, 1989). By progressing in need-congruent goals, people may provide themselves with the "psychological nutriments" (Ryan, 1995; Sheldon et al., 1996) that are necessary to attain new levels of adjustment, self-actualization (Rogers, 1968), and personality integration (Sheldon & Kasser, 1995). The idea that personal growth was indirectly measured in this study is supported by examination of the three most highly congruent goals listed by participants. "Grow with God," "become more sensitive to my fiancée," and "keep in touch with friends back home" are all goals that, when attained, seem quite conducive to psychological development. In contrast, "get off of academic probation," "apply to medical school," and "get a 4.0 GPA" may be less directly relevant to psychological growth processes. Of course, the current results do not show directly that people who made progress in needcongruent goals underwent personal growth—further research is required to test this idea.

Several limitations of this study are noteworthy. First, other potential predictors of progress were not examined, such as interpersonal support (Ruchlman & Wolchik, 1988), goal specificity (Locke & Latham, 1990), implementation intentions (Gollwitzer, 1993), or environmental affordances and threats (McArthur & Baron, 1983). Second, we did not consider the specific relevance of life skills to projects (Diener & Fujita, 1995). Another limitation is that the study covered a relatively short period of time. One may well ask whether the people who made progress at congruent goals were able to maintain their well-being gains; studies with longer time frames are needed to address this issue, Fourth, our conclusions are based on a single study, results might not replicate. However, the fact that the same patterns emerged at two statistically orthogonal levels of analysis within this study provides some reassurance on this score. Finally, our measures of progress were all selfreport; such reports may misrepresent participants' objective progress in their goals. One way to address this latter problem would be to help participants identify a range of potential outcomes at the beginning of the study so that their overall progress could later be rated by an outside party (e.g., Goal Attainment Scaling) (Kiresuk, Smith, & Cardillo, 1994; Sheldon & Elliot, 1998). These issues await further research.

CONCLUSION

These results suggest that progress in personal goals, and the effects of such progress on well-being, can be better understood by considering both cybernetic and organismic theories of motivation. The integration of these two theoretical approaches led to two important findings. First, we found that goal attainment is more likely to occur when people have strong social and selfregulatory skills, in addition to having positive beliefs about their goals. This finding goes beyond the question of initial motivation and its effect on performance and begins to address the question of how people actually reduce discrepancies and take steps toward goals. Second, we found that making progress at goals enhances well-being, but only when the goals attained are consistent with presumed inherent psychological needs (Ryan, 1995; Sheldon & Kasser, 1995) and innate growth tendencies (Rogers, 1963). These findings demonstrate for the first time that self-determination and intrinsic orientation are important moderator variables that influence the impact of life attainments on well-being. In addition, these findings provide new support for need-satisfaction models of well-being, the type of support called for by Diener (1984) in his discussion of such models. In sum, it appears that organismic theories can serve to remind cybernetic and cognitive-behavioral theories that our understanding of the impact of goal striving on persons is incomplete unless consideration is given to the underlying needs that goals must serve. On the other hand, cybernetic and cognitive-behavioral theories can offer to organismic models the means to better understand the serial processes by which people go about satisfying their needs.

NOTES

- 1. We conducted a principal components analysis of the four October well-being variables and another analysis of the four December well-being variables. In both of these analyses, only one factor emerged, which accounted for 64.3% and 62.7% of the variance, respectively. Furthermore, the alpha coefficients for the two composites were acceptable; .81 (October) and .80 (December). These results suggest that combining the four specific well-being variables into an aggregate combined well-being variable is justified.
- 2. Recall that we had asked peers to rate participants' general well-being by using the Positive Affect/Negative Affect Scale (Watson, Tellegen, & Clark, 1988). We correlated peer-rated positive and negative affect with participants' October and December positive and negative affect scores and also with two variables representing the average of participants' 12 short-term positive and negative affect scores. Peer-rated positive affect was associated with the average short-term positive affect variable (r=.25, p<.05) but was associated with neither October nor December positive affect. Similarly, peer-rated negative affect was associated with the average short-term negative affect variable (r=.22, p<.05) but was associated with neither October nor December negative affect (all nonsignificant p>0.33). These results, along with the low test-retest coefficients found in Table 3, support our assumption that the monthly well-being variables are midway between state and trait.

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