

An Empirical Examination of the Antecedents of Commitment to Difficult Goals

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Goal commitment has been given a critical role in goal-setting theory, yet the factors associated with commitment to difficult goals have not often been studied. This study examined possible antecedents of commitment to difficult goals. Two sets of such variables were examined: situational (goal publicness and goal origin) and personal (need for achievement and locus of control) factors. Both sets of variables accounted for significant amounts of variance in goal commitment among 190 college students with academic goals. A Person \times Situation interaction also accounted for a significant increment of variance. Specifically, commitment to difficult goals was higher when (a) goals were made public rather than private, (b) when locus of control was internal, and (c) when subjects were high in need for achievement, especially when goals were self-set as opposed to assigned.

The major finding in goal-setting research is that difficult goals lead to higher levels of performance than do easy or vague goals (Locke, Shaw, Saari, & Latham, 1981). This finding depends on the assumption, however, of commitment to those difficult goals. Locke's emphasis on the critical role of goal commitment has not diminished over the years. In a more recent review, for example, Locke, Latham, and Erez (1988) stated that "it is virtually axiomatic that if there is no commitment to goals, then goal setting will not work" (p. 23). Empirical research clearly supports this conclusion (Earley, 1985a, 1986; Erez & Arad, 1986; Erez, Earley, & Hulin, 1985; Erez & Zidon, 1984).

Goal commitment can be defined as the determination to try for a goal and the persistence in pursuing it over time (Locke et al., 1981). As such, goal commitment implies an unwillingness to lower or abandon the goal (Campion & Lord, 1982). The term goal commitment has often been used interchangeably with the term goal acceptance in the past. Although distinctions between these constructs can be drawn (Hollenbeck & Klein, 1987; Locke et al., 1988), these distinctions are unimportant here.

Given the critical role assigned to goal commitment by early goal-setting theorists (i.e., goal difficulty leads to high performance only when there is goal commitment), the assessment of goal commitment should have played a prominent part in goal-setting research. A recent review by Hollenbeck and Klein (1987), however, has shown otherwise. In most studies, no men-

tion whatsoever is made of goal commitment (or goal acceptance).

Hollenbeck and Klein (1987) also presented a conceptual model of the antecedents of goal commitment. The present study provides an empirical test of portions of that model. For two reasons, the focus of the present study is on commitment to difficult goals, not goals in general. First, Locke et al. (1988) noted that lack of commitment to easy goals is not the same conceptually as lack of commitment to difficult goals: The former will often result in setting a higher goal, the latter in the setting of lower goals or no goals at all. Second, as Hollenbeck and Klein (1987) noted, because there is little reason to advocate the setting of moderate or easy goals, commitment to them is not an important issue.

Antecedents of Goal Commitment

Situational Variables Affecting Goal Commitment

Salancik (1977) discussed several situational variables that increase one's commitment to an act or course of action. Salancik assumed that people have a strong desire to appear rational and consistent to other people. Given this predisposition, people tend to resist changing an established course of action, because doing so would make them appear inconsistent. Because of the social nature of this process (i.e., the fear of appearing inconsistent to other people), one key to commitment, according to Salancik, is publicness; that is, the extent to which significant others are aware of the act. Therefore, all else being equal, the first hypothesis is that commitment to difficult goals is greater when goals are made public than when they are kept private.

Studies by Pallak and Cummings (1976) and Dweck and Gilliard (1975) lend some indirect empirical support to this prediction. Pallak and Cummings found that homeowners who were publicly identified with an agreement to reduce energy consumption did in fact reduce consumption more than privately committed homeowners. Dweck and Gilliard found that chil-

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dren's persistence at a insoluble puzzle was greater when they made public statements regarding their expected success on the task, compared with when no such public statements were made. These studies are indirect in that neither measured commitment directly but rather inferred commitment differences from subsequent performance differences.

A second important factor related to commitment mentioned by Salancik is volition, that is, the extent to which the individual is free to engage in the behavior. Actions undertaken of one's own free will have stronger implications for self-consistency, and thus are more psychologically binding, than actions that can be attributed to external sources. In the goal-setting context, volition should be closely associated with goal origin. Self-set goals necessarily imply volition, whereas assigned goals imply less volition. Therefore, the second hypothesis tested here is that, all else being equal, commitment to difficult goals is higher under self-set goal conditions than under assigned conditions.¹ Research by Earley (1985b) gives empirical support to this proposition.

Personal Factors Affecting Goal Commitment

Theory and past research suggest several personal variables likely to relate to goal commitment. Jackson (1974) stated that an individual high in need for achievement "aspires to accomplish difficult tasks; maintains high standards and is willing to work toward distant goals" (p. 6). On the basis of this conceptualization, the third hypothesis tested here is that commitment to difficult goals is positively related to need for achievement. Although no previous research has examined this relation directly, empirical research shows that variables that are positively associated with the choice of goal level (i.e., degree of difficulty) under self-set conditions are also related to commitment to assigned goals (Earley, 1985a; Hollenbeck & Brief, 1987). Thus, research by Yukl and Latham (1978) and Matsui, Okata, and Kakayuma (1982), showing that need for achievement is positively related to choice of goal level, provides indirect evidence that need for achievement may also be related to commitment to difficult goals.

Locus of control (Rotter, 1966) may also be associated with commitment to difficult goals. For those with an external locus of control, goal attainment would be more likely to be perceived as beyond their control. Those with an internal locus of control, faced with a difficult goal, would be more likely to perceive its attainment as within their control, merely requiring more effort. Hence, the fourth hypothesis tested here is that commitment to difficult goals is negatively related to externality. There is indirect empirical support for this proposition in that Yukl and Latham (1978) found that externals, when given the opportunity, set less difficult goals than did internals.

Person \times Situation Interactions

Although we have discussed only main effects thus far, in the present study we also examined the possibility for interactions between variables in determining commitment to difficult goals.

Method

Subjects and Task

Subjects were undergraduate students enrolled in introductory management courses at a large midwestern university. Subjects received a small amount of extra credit in return for their participation. Performance in their academic courses during the quarter served as the task. We initially recruited a large number of subjects (451) to offset uncontrolled attrition and planned attrition (which we deliberately caused, to meet particular requirements inherent in this research). Ninety-nine subjects were lost for reasons uncontrolled by us (e.g., failing to fill out questionnaires properly, dropping out of the class from which they were recruited, etc.), and we deliberately removed 162 subjects for reasons provided later.

Independent Variables

Manipulations. Because goal publicness and goal origin were conceptualized as characteristics of the situation, rather than the person, we manipulated these variables to ensure sufficient variation. All subjects were randomly assigned to experimental conditions.

Goal publicness was manipulated in the following fashion: (a) We put the names and grade point average (GPA) goals of about half of the students on a list that was distributed to all other individuals within that condition and (b) sent a copy of their respective goals to a self-determined significant other. In over 90% of the cases, this person was either a parent or a sibling. We used both of these methods to increase the probability that each subject's goal was revealed to some "important" audience.

Goal origin was manipulated by allowing half of the subjects to set their own goals (choosing from a list of GPA goals ranging from 1.0 to 4.0, in .25 gradations), whereas we unilaterally assigned goals to the remaining subjects. To prevent possible confounding of goal origin with goal difficulty, we used a yoked design. We conducted a self-set experimental session first (which was followed by a session with an assigned group) in which the goals chosen by the individuals in the first session were assigned to individuals in the second. In this way, identical distributions of goal difficulty across conditions were assured.

One problem inherent in allowing complete freedom for subjects in the self-set conditions to establish their own goals is that there was no way for us to ensure the setting of difficult goals. Given the potential for demand characteristics, however, even hinting to subjects that they should set difficult goals could undermine perceptions of personal freedom. One way to meet both of these criteria (i.e., to have difficult goals as well as complete freedom in the self-set group) was to use only that subset of the total sample of subjects that actually set difficult goals. A difficult goal was operationalized as one that was .25 GPA points higher than the individual's past performance. This first instance of deliberate attrition brought the usable sample size down, from 352 to 266.

The .25 level was chosen on the basis of our subjective judgment regarding what constituted a difficult goal in this context, balanced with the need to retain enough subjects to provide a sufficiently powerful test

¹ It is often the case that those assigning the goals also have the power to reward or punish people for goal accomplishment or failure. Indeed, Hollenbeck and Klein (1987) proposed reward structures as being a major factor influencing goal commitment, and this proposition has received empirical support (Kernan & Lord, 1987; Wright, 1987). Goal origin and reward structures are clearly separate constructs, however, and the present study deals with the former, divorced of the latter. Studies using what Locke, Shaw, Saari, and Latham (1981) refer to as the "tell and sell" method of goal assignment explicitly attempt to manipulate these constructs in tandem.

of the hypotheses. That is, an increment of past GPA of .10 was not, in our opinion, difficult enough. On the other hand, we feared that (a) few subjects in the self-set condition would set a goal for themselves that was .50 GPA points beyond what they had achieved in the past and (b) that using .50 as the cutoff would eliminate a host of subjects whose cumulative GPA exceeded 3.5. It should be noted here that 18% of the subjects remaining in this study eventually went on to accomplish their goals.

This past performance level, however, was another possible confound that needed to be controlled. Given the vast amount of empirical research documenting the relation between past performance and future goals (Campion & Lord, 1982; Hollenbeck & Brief, 1987; Hollenbeck & Williams, 1987; Locke, Frederick, Lee, & Bobko, 1984; Matsui et al., 1982), using only the procedure described thus far, creates the possibility that there would be greater correspondence between past performance and goal level in self-set conditions than in assigned conditions (in which goal level was essentially determined at random). In order to preclude this possible confound, a matching procedure was used. Assigned goal subjects were only included in the final analysis if there was a corresponding subject in the self-set condition with the same past performance-goal level discrepancy (operationalized as within .05 GPA points). This second instance of forced attrition brought the usable sample size down to 190.

Although they resulted in a loss of subjects, the two instances of deliberate attrition created the following desired situation in the remaining sample: (a) All subjects had difficult goals (i.e., at least .25 GPA points higher than their cumulative GPA up to that point), (b) subjects in the self-set condition had as much freedom as we could allow in establishing their own goals, (c) there were identical distributions of goal level across goal origin conditions, and (d) there was an identical distribution of past performance-goal level discrepancy (i.e., within .05 GPA points) across goal origin conditions. We judged that the gain in reducing threats to internal validity through these two acts of forced attrition more than offset the loss of subjects, particularly because the final sample size provided more than enough statistical power to test the hypotheses.

Measures. Because need for achievement and locus of control were conceptualized as personal variables, we used standardized measures of these constructs. Need for achievement was measured with the 20-item scale from the Personality Research Form (Jackson, 1974). Wiggins (1972) provided evidence documenting the reliability, factor structure, and convergent and discriminant validity of this scale; the coefficient alpha estimate of reliability for this scale was .76 in the present study.

Locus of control was measured with the 29-item scale provided by Rotter (1966) and reviewed by Spector (1982). In the present study, coefficient alpha was .88.

Past performance was used as a control variable and was operationalized as the students' cumulative GPA prior to the study. We accessed this information from archival records maintained at the university's registrar's office.

Goal level was operationalized as the difference between the individual's goal for the present quarter and his or her past performance in terms of cumulative GPA. Recall that the subject selection procedure deliberately restricted the range on this variable so that only individuals with difficult goals (i.e., .25 or greater) were used in tests of hypotheses.

Dependent Variables

Goal commitment. There is no standardized, agreed upon measure of goal commitment, and the reliability evidence for the scattered measures is low or lacking altogether (Hollenbeck & Klein, 1987). Because there was little compelling reason for adopting any one previously used measure of goal commitment, we constructed a nine-item self-report measure of goal commitment for this study by combining items previously used in this area with new items. This measure served as the primary dependent variable of interest in this study and was obtained

Table 1
Goal Commitment Items and Factor Loadings

Item	Factor loading
1. I am strongly committed to pursuing this GPA goal.	.61
2. I am willing to put forth a great deal of effort beyond what I'd normally do to achieve this GPA goal.	.46
3. Quite frankly, I don't care if I achieve this GPA goal or not.	.89
4. There is not much to be gained by trying to achieve this GPA goal.	.42
5. It is quite likely that this GPA goal may need to be revised, depending on how things go this quarter.	.64
6. It wouldn't take much to make me abandon this GPA goal.	.70
7. It's unrealistic for me to expect to reach this GPA goal.	.73
8. Since it's not always possible to tell how tough courses are until you've been in them a while, it's hard to take this goal seriously.	.69
9. I think this GPA goal is a good goal to shoot for.	.98

Note. $N = 190$. GPA = grade point average. Eigenvalue = 4.45; variance explained = 49.4. Items 3, 4, 5, 6, 7, and 8 were reverse coded such that a high score on this scale reflects high goal commitment.

4 weeks into the quarter, just prior to mid-term examinations. This timing was used so that subjects would have enough course experience to judge how realistic their goals were (which would not have been possible if assessed at the beginning of the quarter) but not enough feedback to know whether or not their goals were actually achieved (as would be the case if assessed at the end of the quarter).

All nine items, along with the results from a principal-axis factor analysis, are provided in Table 1.

One factor appeared to dominate the pattern of responses to these items. In sum, 49.7% of the variance could be accounted for by a single factor. Items 1, 3, 5, 6, 7, 8, and 9 loaded .50 or more on this factor. We also attempted a two-factor solution. A second factor explained additional variance of only 17%, with Items 2 and 4 exhibiting the only appreciable, unique loadings. Because these two items seemed to load on a separate factor, they were deleted from the scale. The remaining seven items were treated as a unidimensional measure of goal commitment. Coefficient alpha reliability of this scale was .88.

GPA performance. Although the primary purpose of this research was to explore the antecedents of commitment to difficult goals rather than performance per se, we used GPA performance to provide construct validity evidence for the goal commitment measure. GPA performance was operationalized, in line with goal difficulty, as the difference between performance for the quarter during which the experiment took place and prior cumulative GPA.

Procedure

We recruited subjects from classes during the first week of the term. The study was described as investigating the effects of goal setting on academic performance. At the first session, we distributed a questionnaire that assessed (a) various demographic characteristics, (b) locus of control, and (c) need for achievement. The questionnaire also solicited permission for us to obtain prior GPA and GPA for the quarter during which the experiment was conducted. Following this portion of the questionnaire, subjects in the self-set condition selected a GPA goal for the upcoming quarter. In the assigned conditions, this portion of the questionnaire assigned a GPA goal to the subjects. For half of the sub-

Table 2
Means, Standard Deviations, and Intercorrelations Among Study Variables

Study variable	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7
1. Publicness	.50	.50	—						
2. Goal origin	.49	.50	.01	—					
3. Need for achievement	2.86	.26	.10	.09	—				
4. Locus of control	.47	.17	.00	-.07	-.14	—			
5. Goal commitment	3.44	.72	.16*	.05	.25*	-.18*	—		
6. Goal level	.54	.55	.06	.00	-.05	.02	-.02	—	
7. GPA performance	.08	.40	.12	.09	.10	.05	.36*	.21*	—

Note. GPA = grade point average. *N* = 190.

* *p* < .05.

jects (i.e., those in the private condition), the questionnaire ended at this point. For the remaining subjects, there was an additional page asking permission for us to (a) list the subject's name and goal so that it could be shared with other participants and (b) send a copy of the goal to a significant other specified (name and address) by the subject.

All subjects were notified that they would also need to complete a follow-up session 3 weeks later. At this follow-up session, we gave all subjects a list of GPA goals, ranging from 2.0 to 4.0 in .25 increments, and asked them to circle the goal they selected (or were assigned) during the earlier experimental session. Subjects also responded to the goal commitment items at this time.

Results

Construct Validation of Goal Commitment Measure

When the entire range of goals is present (i.e., easy, moderate, and difficult), goal commitment is theorized to moderate the relationship of goal difficulty to performance, such that performance is high only when both goal level and goal commitment are high. On the other hand, when all the subjects have difficult goals, there is both strong theoretical rationale and empirical support for the prediction of a positive main effect of commitment on performance. Therefore, to provide a partial test of the construct validity of this goal commitment measure, we as-

sessed the relation between goal commitment and GPA performance after controlling for goal level.

Goal commitment, when entered in the second step of a hierarchical regression, added a 13% increment in variance explained beyond that of goal level alone. The latter accounted for a statistically significant 4% of the variance in performance. This evidence provides some support for the construct validity of the goal commitment measure. Note also that, as would be expected under conditions of restricted goal levels (i.e., in which all subjects have difficult goals), goal commitment did not moderate the relationship between goal level and GPA performance commitment.

Hypothesis Tests

Means, standard deviations, and intercorrelations among all variables are shown in Table 2.²

Table 3 contains the set correlation (Cohen, 1982) results of regressing goal commitment on the two sets of variables and their interactions. The set of situational variables accounted for a statistically significant 3% of the variance in goal commitment, all of which was attributable to goal publicness. This effect was in the hypothesized direction, that is, making goals public resulted in higher commitment.

As a set, the personal factors accounted for an additional 9% of the variance explained in commitment. The bulk of this overall effect could be attributed to need for achievement, which accounted for an increment in variance explained of 6%. Locus of control also accounted for a statistically significant increment in variance explained of 3%. The direction of these statistically significant effects was again in the hypothesized direction. Commitment to difficult goals was highest for subjects with an internal orientation and high need for achievement.

Finally, as a set, the Person \times Situation interaction accounted for a statistically significant 3% of additional variance explained. All of this overall effect was due to the Goal Origin \times

Table 3
Set Correlation Results of Regressing Goal Commitment on Situational Variables, Personal Variables, and Their Interactions

Set	<i>R</i> ²	ΔR^2
Situational		
Publicness (P)	.03*	.03*
Goal origin (O)	.03*	.00
Personal		
Need for achievement (A)	.09*	.06*
Locus of control (L)	.12*	.03*
Person \times Situation		
P \times A	.12*	.00
P \times L	.12*	.00
O \times A	.15*	.03*
O \times L	.15*	.00

Note. *N* = 190.

* *p* < .05.

² Grade point average (GPA) itself was measured on a scale ranging from 0.00 to 4.00. The .54 in the first column of Table 2 for goal level indicates that, on average, the goals the subjects were attempting to reach were .54 GPA points above their prior cumulative GPA. Similarly, the .08 in the first column for performance indicates that, on average, performance for those subjects that quarter was .08 GPA points above their prior cumulative GPA.

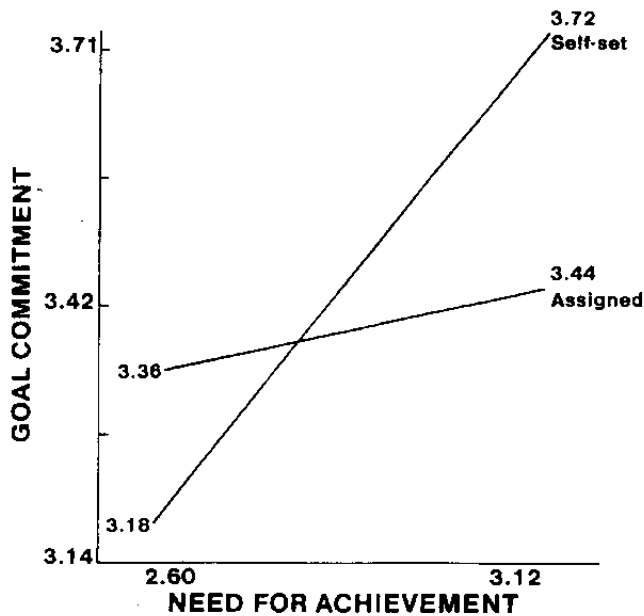


Figure 1. The relation between need for achievement and scores on goal commitment (range of item scale values = 1 to 5) for self-set and assigned goal conditions.

Need for Achievement interaction. The nature of this interaction is illustrated in Figure 1, where the need for achievement-goal commitment relation is plotted separately for self-set and assigned groups. Figure 1 reveals that the relation between need for achievement and goal commitment is stronger when goals are self-set, as opposed to when they are assigned.

Discussion

In both his original (Locke, 1968) and more recent works (Locke et al., 1988), Locke has stressed the importance of goal commitment when using goal setting to enhance performance. The research reported here, although primarily focused on the antecedents of goal commitment, clearly confirmed past research by showing the important consequences resulting from high commitment. Goal commitment accounted for 13% of variance in a measure of future GPA performance, after controlling for goal level.

Given the widespread consensus on the need to ensure the existence of (a) difficult goals and (b) commitment to those goals, it is unfortunate that some research suggests that these two variables may be inversely related (Erez & Zidon, 1984). The results of this study, however, are instrumental in establishing the conditions under which both of these objectives might be achieved.

Turning first to the situational variables, one sees that goal publicness was an important factor that enhanced the degree of goal commitment for subjects in this sample. Thus, Salancik's (1977) statement that "one of the simplest ways to commit yourself to a course of action is to go around telling all your friends that you are definitely going to do something" (p. 6) is supported by this study. This finding seems to have significant

practical value, because goal publicness can be easily and inexpensively achieved by either managers or employees themselves.

The predicted relation between goal origin and commitment was not supported by the data. That is, with goal level and the past-performance-goal-level discrepancy held constant, goal commitment did not differ between self-set and assigned conditions *per se*. Moreover, because it could be the case that the self-set group may have had higher initial motivation than the assigned group, the lack of an effect for goal origin in this context may speak strongly for the effectiveness of assigned goals.

There was evidence, however, that for a particular subset of individuals, goal origin did make a difference. Specifically, individuals high in need for achievement demonstrated higher commitment than did subjects low in need for achievement. As illustrated in Figure 1, this was particularly true when these subjects set their own goals. Perhaps because goal setting and accomplishment are not central aspects of the self-concept for individuals with low need for achievement, it may not be easy to generate a great deal of goal commitment in this group of subjects. Certainly, one should not expect a great deal of commitment from these individuals simply because they were allowed to set their own goals or participate in goal setting. Probably only potent external rewards or punishments would be efficacious in achieving commitment to difficult goals for this group.

Although personal variables interacted with situational variables in the case presented here, the main effects of these variables should not be overlooked. As a set, these variables explained an additional 9% of the variance in commitment to goals. Both locus of control and need for achievement were, as predicted, significantly related to commitment. That is, all else being equal, individuals with an internal orientation and high need for achievement were more likely to commit themselves to difficult goals than were individuals with an external orientation and low need for achievement.

This study was designed to test for factors associated with commitment to difficult goals rather than to goals in general. To achieve this purpose, only subjects who set goals that were .25 GPA points higher than the cumulative GPA were included in the final analysis. One of the reasons for this restricted focus was the Locke et al. (1988) statement that commitment to difficult goals and to easy goals are not the same conceptual phenomenon. To check this premise, many of the analyses performed in this study for difficult goal subjects were repeated for the entire set of subjects.

Relative to the consequences of goal commitment, these additional analyses revealed two points of interest. First, by increasing the range of goals, the overall effect size for goal difficulty on performance increased from .04 to .06. On the other hand, the effect size of goal commitment on performance (again controlling for difficulty) decreased from .13 to .04. Although this 4% increment in variance explained was still statistically significant, this was clearly a drastic reduction in variance explained. These results are consistent with those of Earley (1985b), who showed that there is a stronger relation between commitment and performance when within a number of goal difficulty levels than when subjects are combined across goal difficulty levels.

Relative to the antecedents to goal commitment, however, in-

creasing the range of goals did not appreciably affect the results. Although there were no longer any interactions, the main effects were unchanged. There were significant correlations between commitment and (a) publicness, (b) need for achievement, (c) externality, but (d) not goal origin. Thus, Locke et al.'s belief that commitment to difficult goals is conceptually different from commitment to goals in general is supported here in terms of the consequences of commitment but not in terms of antecedents.

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