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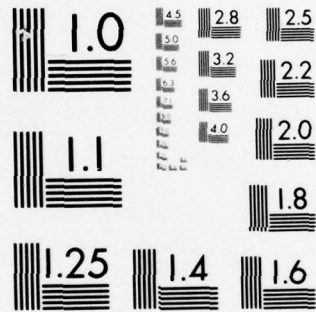
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Self Rewarding and Task Performance:

Internal and External Criteria

Milton R. Blood

College of Industrial Management  
Georgia Institute of Technology

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20. ABSTRACT (Continue on reverse side if necessary and identify by block number) An empirical test is performed on a model of the relationships between self rewarding and job performance. The cognitive structure that is posited by the model is confirmed when an internal criterion is used but not when an external criterion is used. The implications are discussed. ←		

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## Self Rewarding and Task Performance:

### Internal and External Criteria

Milton R. Blood

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Work performance is influenced by many facets of the work situation. Researchers have focused attention on objective characteristics of the work environment such as illumination, noise, and temperature; social influences such as leadership style, competitiveness, and work group heterogeneity; design aspects of the task such as complexity, strength requirements, and agility requirements; and personal characteristics of the worker such as affect for the task, ability levels, and personality dimensions. Any of the categories above could be greatly expanded to display an array of performance influences that have been examined in detail. It is the purpose of this report to concentrate on only one, albeit an important, influence on work performance - the cognitive, affective reaction of the worker to his/her own work performance.

One influence on variations in job performance is the worker's own satisfaction with that performance (Herold & Greller, Note 2). In a conceptual article, Blood (1978) set out the framework for a theory of self-rewarding that posits an interactive relationship between work performance and the worker's cognitive reaction to the work performance. The relationships specified in that theory will be examined in this report as well as the possibility that the specification of an internal or external measure of work performance may be an extremely important consideration when investigating theories that suggest the influence of cognitive processes.

Specifically, this research will examine in a particular sample the strengths of the relationships that are specified by the self-rewarding model. The model explains the operation of one kind of intrinsic motivation. It provides a structure for the operation of those influences on work performance that are self generated. As a cognitive model it considers the psychological, or thought, processes that are involved in performance motivation. Self rewarding for performance is treated as a performance consequence that influences future performance. The self reward is a hypothetical cognitive activity. It is the private, evaluative response made by an individual as a reaction to his/her work performance. This model and research explores how this one kind of intrinsic motivating device operates, and how its operation can be enhanced by other characteristics of the work situation. Put another way, the model and research investigate the antecedents (cognitive and organizational) and the consequences (performance) of self rewarding. In the model performance and self rewarding have a reciprocal relationship so that performance is both an antecedent and a consequence of self rewarding.

The research also compares the results for the model that are obtained when two different criterion sources are used. In this case, supervisor performance evaluations are used as one source and self ratings of performance are used as another source. Lawler (1967) demonstrated a non-correspondence between different rating sources. Later researchers (Borman, 1974; Zedeck and Baker, 1972) offered suggestions as to how this non-correspondence could arise. The present research shows the impact of this non-correspondence on a cognitive

model that attempts to predict performance.

The model (Blood, 1978) is shown in Figure 1. The interactive relationship between self rewarding and work performance is its central feature. The self-reward variable is considered to interact as an operant consequence with performance. Self rewarding is contingent on and immediate with (cognitive recognition of) performance, and it is assumed to have reinforcing or punishing value according to whether it is positive or negative (pride or shame). Increases in self rewarding should be accompanied by increases in performance. Likewise, since the self rewarding is based on performance, better performance should give rise to more self rewarding. There is no need to engage in a "chicken or egg" debate here. Both theoretical entities can influence the other. Nor are either performance or self rewarding such unambiguously definable entities that this conceptualization requires an infinite spiral upward or downward. The notion is too simple and the entities too flexible to allow such logical deductions. The model simply says that people who perform better will be more proud; in dynamic terms, a person who improves performance will have a concomitant increase in pride.

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Insert Figure 1 about here  
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If a worker perceives accurately both the performance goal (Goal Recognition) and the worker's own job performance (Performance Recognition), then this central relationship can occur. These two

variables enable the connection between the variables of the central relationship. In the model they are called Enablers to connote that some threshold amount of Goal Recognition and Performance Recognition is necessary.

The relationship can be strengthened, according to the theoretical explication, by raising the level of the worker's personal interest in the task (Task Interest) or the worker's personal identification with the task (Task Identification) and the product (Product Identification). These moderators of the self-reward and work-performance relationship are influenced by characteristics of the work situation specified in the model. By assessing the "Organizational Characteristics," "Moderators," and "Enablers" in a work situation it should be possible to diagnose the opportunity in that organization for the focal relationship to be an important performance influence.

Readers may refer to the expository article (Blood, 1978) for the justification of each of the model's theoretical units and laws of interaction. One important characteristic of the model should be noted. It is limited to the influence of self-rewarding on work performance. Many other influences on performance are not addressed by the model. Therefore, it is appropriate to expect that only some significant proportion of the variance in performance will be controlled by the self-reward variable.

The importance of the definition of job performance to this research requires further treatment here. Since the model is essentially cognitive, it should be phenomenologically consistent. So

long as all of the variables are perceptual we should expect confirmation of the theory. Such a confirmation would support the theory as a useful structure of cognitive events, a psychological description of the operation of pride or shame as an influence on performance. The model is meaningful beyond its usefulness as a map of cognitive events to the extent that the internal or perceived job performance criterion corresponds to some externally recognized performance criterion. When that correspondence is great, then the variables of the model should allow predictions of externally recognized performance, and the diagnosis of performance problems. If there is low correspondence of internal and external criteria, then the relationship should still hold for the internal but not for the external criterion.

#### Method

Setting and subjects. This study was conducted in the dental school of a private university located in a major metropolitan area of the southeastern United States. The research topic is particularly appropriate for this student population since the students are preparing to enter a profession where self motivation is necessary. Dentists often practice alone, and they are generally not subjected to external monitoring of the quality of their work. Further, some of the staff of the school felt that an important characteristic that differentiated the outstanding students from the others was the degree to which they evidenced personal concern for, or pride in, the quality of their work performance. The school has established a reputation as

an excellent dental school. Both entrance into the school and performance in the school are highly competitive.

The subjects of the study were 60 of the 94 members (64%) of the junior (3rd year) class of the school. Fifty-eight members of the sample were male; three female students did not respond. All of the sample had completed an undergraduate degree and had attended this dental school for all of their professional training. The program that these students were following was identical for all of them, i.e., they all participated in the same classes, laboratories, clinical experiences, etc.

Administration. This study was conducted as a survey of the junior class. At the beginning of a regularly scheduled lecture class the principal investigator introduced the survey as an attempt to gain knowledge of the school and academic program from a student's perspective. Assurances were given that all information would be treated confidentially, and that summary information would be provided for the school administrators. Questionnaires along with stamped envelopes addressed to the investigator at another university were distributed to all class members in attendance.

One week later the investigator returned to the lecture period to urge anyone who had not completed the questionnaire to do so and to return it. New questionnaires and envelopes were given to students who had been absent at the initial session or who may have misplaced their original copy. Assurances of confidentiality were repeated, and the students were asked to initial a statement granting permission to the investigators to obtain their cumulative grade point average from their

permanent school record. All of the questionnaires that were analyzed were received within two weeks following this second meeting.

Criterion Measures. Two criterion measures were used to represent the theoretical unit of job performance in the model. The first of these was grade point average (GPA) in dental school. Usually, GPA is a highly suspect criterion of student performance. Because students have taken different courses from different instructors, there is little common meaning to give comparability to such measures. In this case, however, GPA represents exactly the same sequence of courses for every student. The lock-step dental program had each member of this class taking the same courses at the same time from the same instructors. Thus, this GPA does represent a measure of academic performance that is comparable across students.

The second criterion measure for this study is a self-evaluation of performance. This measure is composed of three items taken from the study by Porter and Lawler (1964). The items represent self evaluations of performance quantity, quality, and effort. Responses were given on a 7-point scale and the items were summed to derive a performance evaluation called Self Rating in this report.

Table 1 displays the statistical characteristics of the criterion measures. The mean GPA represented a grade of approximately B- and the

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Insert Table 1 about here  
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mean self evaluation was approximately halfway between the neutral point and the extremely positive end of the self evaluation scale. The correlation between the two criterion measures is  $-.14!$

Cognitive measures from the self reward model. A questionnaire was developed to assess each of the cognitive variables in the self reward model. A number of items were written to define dimensions, and several items were taken from the Job Diagnostic Survey (Hackman & Oldham, 1975). A questionnaire containing the items was administered to an undergraduate management class (Pilot Sample 1). In this first try-out sample, each dimension was represented by six items. The self reward dimension was subdivided into three components, each represented by six items -- Personal Growth, Pride, and Sense of Accomplishment. After studying the scale reliabilities and item analyses from this first administration, some revisions were made in items, and another questionnaire of the same size was administered to the members of another undergraduate management class (Pilot Sample 2). Using the item analyses from the second administration, a research version of the questionnaire was developed that utilized only three items to represent each dimension. Each dimension was represented by two items stated positively for the dimension and one item stated in a reversed representation. Each of the items utilized a 7-point response format with four as the neutral response. Scales were scored by summing the item scores and dividing by three. The dimension reliabilities in the

two pilot samples and the extant sample can be seen in Table 2. The means and standard deviations of the measures of the extant sample are shown as the final two columns of Table 2.

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Insert Table 2 about here  
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Analysis. The important analyses of this study concern the relationships predicted by the self rewarding model. The focal relationship between job performance and self rewarding is demonstrated by computing the simple correlations between indices of those two variables. The relationships between the focal relationship and the Enablers and between the focal relationship and the Moderators are analyzed as moderated regression relationships (Blood and Mullet, Note 1; Peters and Champoux, Note 3). Relationships between the organizational characteristics and the moderators are analyzed as correlations between those two sets of variables.

#### Results

The focal relationship. The first part of the model being investigated is the focal relationship. To what extent does this sample display the interactive effect predicted between job performance and self rewarding? The model does not predict that this relationship will be high in all situations. In fact, it specifically calls for the relationship to be moderated by other variables. Therefore, it is assumed that the strength of this relationship will vary from situation to situation, and in some cases may be quite small.

In the present study we have two measures of job performance, GPA and Self Ratings. The self rewarding dimension can be broken down into its three sub-scales, sense of Personal Growth, Pride in Performance, and Sense of Accomplishment. Table 3 presents the relationships between the indices of self rewarding and the performance variables. A relationship exists for Self Reward and Self Rating, but no relationship exists between Self Rewarding and GPA.

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Insert Table 3 about here

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Moderated relationships. Those variables called Enablers and Moderators in the self rewarding model (Figure 1) should be related to the relationship between self rewarding and job performance. That is, they should act as moderators. These relationships were tested with a moderated regression model (Saunders, 1956). In order to assess the full effect of the moderated relationship, each moderator was multiplied times the self rewarding variable and the product was correlated with job performance (Blood and Mullet, Note 1). This analysis was a regression of the form  $y = a + b x z$ , where  $x$  is the independent variable and  $z$  is the moderator.

The correlations of the moderated relationships are shown in Table 4. There are no moderator effects when GPA is used as a criterion measure. A relatively strong moderator effect exists for Task Interest and Task Identification with Self Ratings used as the criterion. If

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Insert Table 4 about here  
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the self rewarding variable is broken into its three component parts, the moderating relationships remain approximately the same. The third column shows the relationships with personal growth as the self rewarding variable. In addition to Task Interest and Task Identification as statistically significant moderators, Product Identification barely reaches the .05 level of significance, and Performance Recognition barely misses the .05 level of significance. The apparent discrepancy in the significance designations is caused by rounding. The strongest moderator effects are shown when only the sub-scale Pride is used as the self rewarding variable (Column 2). Here Performance Recognition and Product Identification join Task Identification and Task Interest as statistically significant moderators. Column 5 displays the moderator effects with Sense of Accomplishment as the moderator variable. As in Column 2, only Task Interest and Task Identification reach statistical significance as moderators. Goal recognition did not approach significance as a moderator in any of the moderated regression analyses.

In a paper describing the interpretation of moderated regression analysis, Peters and Champoux (Note 3) demonstrate two procedures for analyzing the moderating effects. The results from those procedures are shown in Tables 5 through 9 for the analyses using Self Ratings as the measure of performance and Self Reward as the independent variable. The first five columns of the tables present the values of Self Rating

that are generated by substituting the values of Self Reward and the appropriate Enabler or Moderator in the standard moderated regression formula,  $\hat{y} = a + b x + cz + dxz$ , where  $y$  is the predicted value of the Self Rating,  $x$  is the value of Self Reward, and  $z$  is the value of the Enabler or Moderator. The values chosen for the marginal values of the tables (and used to generate the tabled values) are the mean of each variable and + one-half and one standard deviation. These values divide a normal distribution into six approximately equal sections.

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 Insert Tables 5 through 9 about here  
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The last two columns of the tables examine the regression equations directly. The basic moderated regression equation is restated as  $\hat{y} = (a + cz) + (b + dz)x$ . Then, by substituting in the values for the moderating variable,  $z$ , it is possible to discern the regression value that would maximally predict Self Rating from Self Reward for varying values of the moderating variable. The tabled regression coefficients have been standardized.

The amount of variance accounted for in predicting Self Rating ( $y$ ) from Self Reward ( $x$ ) varies according to the value of the Enabler or Moderator used. The difference from the lowest to the highest value ranges from a 21% difference with Task Interest (Table 7) to a 54% difference with Performance Recognition (Table 6).

The reader should notice a difference in the information provided in the Peters and Champoux (Note 3) analyses (Tables 5 through 9) from that given by the Blood and Mullet (Note 1) analysis (Table 4). Whereas, the data in Table 4 utilize the empirical relationship of the interaction term to the dependent variable, the data in Tables 5 through 9 are generated from the formula incorporating the linear terms as well as the interaction. The empirical values from this sample that were used to generate the data are shown below each of the tables.

Relationships between work characteristics and moderators. The model suggests that the strength of various moderators will be increased by the degree to which jobs are perceived to have various characteristics. These relationships can be shown by simple correlations between measures of the perceived work characteristics and the moderators (Table 10). However, the empirical patterns are not nearly so neat as the model. All of the work characteristics

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 Insert Table 10 about here  
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except External Prestige are significantly related to Task Interest. All of the work characteristics except Social Worth and Influence on Results are related to Task Identification. Relationships to Product Identification are more modest, with Skill Utilization, Internal Status, Authorship, and Influence on Results all failing to reach statistical significance. Some of the relationships that fail to reach significance embarrass the model. Social Worth should be related to Task Identification according to the model. In this sample, however,

it is significantly related to Task Interest and Product Identification but not significantly related to Task Identification. Authorship should be related to Product Identification according to the model. It is related to Task Interest and Task Identification, but not to Product Identification. Influence on results should be related to product identification, but its only significant relationship is with Task Interest.

#### Discussion

The results of this investigation are divisible into two general topics. The first of these is the extent to which the data confirm the self rewarding model. The focal relationship between job performance and self rewarding is substantiated for the Self Rating criterion but not for GPA (see Table 3). The moderating effects of the Enablers and Moderators on the focal relationship is likewise confirmed for Self Ratings but not for GPA.

The linear relationships that the model presumes between the moderators and the organizational characteristics are more pervasive than the model depicts them. Reserving interpretations to only those correlations that reach the .05 level of significance (see Table 10) it is clear that the perceived characteristics of the task are often related to more than one of the moderators. Novelty is related to all three Moderators. Variety, Skill Utilization, Internal Status, and Authorship all are related to both Task Interest and Task Identification. Skill Development is related to Task Interest and Product Identification. External Prestige is related to both Task

Identification and Product Identification. Social Worth is related only to Task Interest, while Influence on Results is not significantly related to any of the Moderators.

The particular pattern of relationships found in this study should be considered cautiously. The sample is small, thus, reducing the statistical power, i.e., the probability of finding a "true" relationship. With an  $n$  of 60 the probability equals only .76 of obtaining a significant relationship in the sample if the "true" relationship is a moderate .30. The small sample size raises the standard error of the correlation coefficients so that the particular pattern of coefficients may change in other samples. Another caution in the interpretation of these relationships is due to the fact that all of the subjects are in the same organizational position. Therefore, the variances in the measures of Organizational Characteristics represent only perceived differences, not real differences in organizational positions.

The most appropriate conclusion from the observations relating the Organizational Characteristics and the Moderators is that relationships exist. If the directionality implied by the model is accepted, the results demonstrate that the Characteristics can cause changes in Task Interest, Task Identification and Product Identification. The model should be modified to suggest the freer pattern of relationships found here. Until empirical data establish specific relationships over several samples, Figure 2 is a more reasonable depiction of the relationship between the two categories of variables.

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Insert Figure 2 about here  
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In general, and with the amendments of Figure 2, as long as the internal criterion is used, the model which has been advanced to explain the operation of self rewarding is confirmed as a reasonable organization for the data. The pattern of relationships specified by the model can be used as a depiction of the cognitive behavior involved in self rewarding. This confirmation derives from a static research, however. The dynamics of the relationships will be more adequately explored in longitudinal studies where the variables that are depicted in causal positions in the model are either manipulated or are allowed to change over time. The concomitant changes in the dependent variables can then be assessed. Such studies are ongoing.

The second topic for discussion flows directly from the first. The focal relationship only held for the internal criterion and not for the external criterion. This is so even though there is reason to believe that the external criterion should have meaning and importance for the members of the sample. The external criterion, GPA, is comparable across students since it represents performance evaluations for exactly the same classes and from the same professors. It is important because the organization's evaluation of performance in this highly competitive setting is largely a function of the GPA. Even with these conditions, GPA was not related to self evaluations of performance, and it was unrelated to Self Rewarding.

If Self Rewarding is to influence performance on the goals of the organization, there must be a correspondence between the organizational evaluation of performance and self evaluation of performance. If, as it appears in this sample, Self Rewarding is only related to Self Rating, then organizational effectiveness can only be enhanced by Self Rewarding to the extent that the Self Rating depends on organizationally valued performance. The model predicts that this will be the case by its insistence on the enabling function of the variables of Goal Recognition and Performance Recognition. In this sample the mean value for both of these variables is below the neutral value (4) on the scale. The subjects typically expressed lack of knowledge about performance goals, and they clearly did not see grades as providing them with information about their level of performance. Nor did they perceive that they had information about their performance level from other sources. They evaluated their own performance on some other grounds, and they provided themselves with self rewarding according to their own internal criterion.

This indicates that a boundary condition for the operation of self rewarding to enhance performance on an external criterion is a correspondence between the external criterion and an internal criterion. It is even possible to imagine work situations where an internal criterion will be in conflict with an external criterion. For instance, a worker might say, "I'll be doing great if I can just slip away and get a nap in the storeroom this afternoon." Such an internal criterion is not only different from an external criterion that the organization might set, it is in opposition. The worker may accomplish

the internal goal and self reward for the performance yet the external criterion performance related to organizational effectiveness would be harmed.

The implication of this for applied settings is that correspondence between individual and organizational performance goals is important. Such an idea is hardly new. The contribution of the model is to describe a psychological mechanism that operates to make it so. With the model we can show why internal and external criteria should match in order to enhance performance. When they match, the self rewarding of the individual workers can operate to provide an additional motivating force in the situation. When they do not match, the motivational force from self rewarding is limited to internal performance goals.

#### Reference Notes

1. Blood, M. R. & Mullet, G. M. Where have all the moderators gone?: The perils of type II error (Tech. Rep. 1). Atlanta: Georgia Institute of Technology, College of Industrial Management, May 1977.
2. Herold, D. M. & Greller, M. M. Intrinsic and extrinsic performance feedback: Their relative effectiveness. Paper presented at the meeting of the Eastern Psychological Association, New York, April 1975.
3. Peters, W. S. & Champoux, J. E. Moderated regression in job design research. Unpublished manuscript, 1977. (Available from Dr. J. E. Champoux, The Robert O. Anderson School of Administrative Sciences, The University of New Mexico, Albuquerque, New Mexico 87131).

## References

- Blood, M. R. Organizational control of performance through self rewarding. In B. King, S. Streufert & F. E. Fiedler (Eds.), Managerial control and organizational democracy. New York: Halsted Press, 1978.
- Borman, W. C. The rating of individuals in organizations: An alternate approach. Organizational Behavior and Human Performance, 1974, 12, 105-124.
- Hackman, J. R. & Oldham, G. R. Development of the Job Diagnostic Survey. Journal of Applied Psychology, 1975, 60, 159-170.
- Lawler, E. E. The multitrait-multirater approach to measuring managerial job performance. Journal of Applied Psychology, 1967, 51, 369-381.
- Porter, L. W. & Lawler, E. E. Managerial attitudes and performance. Homewood, Ill.: Irwin, 1968.
- Saunders, D. R. Moderator variables in prediction. Educational and Psychological Measurement, 1956, 16, 209-222.
- Zedeck, S. & Baker, H. T. Nursing performance as measured by behavioral expectation scales: A multitrait-multirater analysis. Organizational Behavior and Human Performance, 1972, 7, 457-466.

Table 1  
Means and Standard Deviations of the  
Criterion Measures

	Mean	Standard Deviation
Grade Point Average	2.79	.50
Overall Self Rating	5.41	.81
Quantity	4.90	1.60
Quality	5.80	.90
Effort	5.52	.89

Table 2

Scale Reliabilities for the Cognitive Measures (Cronbach's Alpha) and  
Means and Standard Deviations in the Extant Sample

	Pilot Sample 1 N = 21	Pilot Sample 2 N = 29	Dental Sample N = 60	$\bar{X}$	SD
<u>Self Rewarding</u>					
Personal Growth	.93	.95	.83	5.66	1.20
Pride	.92	.90	.83	5.69	.80
Sense of Accomplishment	.96	.92	.79	5.86	.85
Overall Self Rewarding				5.74	.77
<u>Enablers and Moderators</u>					
Goal Recognition	.93	.81	.80	3.92	1.55
Performance Recognition	.94	.93	.66	3.72	1.30
Task Interest	.97	.96	.66	5.39	1.10
Task Identification	.96	.94	.67	5.88	1.03
Product Identification	.82	.51	.68	5.02	1.23
<u>Work Characteristics</u>					
Variety	.89	.94	.72	6.08	.79
Novelty	.91	.92	.83	5.90	.93
Skill Utilization	.91	.80	.37	5.69	.79
Skill Development	.77	.89	.57	6.36	.59
Internal Status	.92	.88	.79	4.74	1.26
External Prestige	.80	.89	.82	5.85	.90
Social Worth	.67	.78	.53	6.27	.68
Authorship	.79	.81	.71	4.74	1.31
Influence on Results	.85	.74	.74	5.95	.90

Table 3  
 Relationships between Self Rewarding  
 and Performance

	Criteria	
	GPA	Self Rating
Overall Self Rewarding	-.03	.46***
Personal Growth	.02	.30*
Pride in Performance	-.17	.58***
Sense of Accomplishment	.03	.27*

\* p < .05

\*\*\* p < .001

Table 4

## Moderation of the Focal Relationship

Moderator	Relationship			Moderated	
	GPA and Self Reward	Self Rating and Self Reward	Self Rating and Growth	Self Rating and Pride	Self Rating and Accomplishment
Goal Recognition	.04	.10	.05	.05	.02
Performance Recognition	.09	.18	.25	.32*	.23
Task Interest	.03	.44***	.42***	.56***	.42***
Task Identification	.00	.47***	.43***	.58***	.44***
Product Identification	.05	.18	.25*	.34***	.22

\*  $p < .05$ \*\*\*  $p < .001$

Table 5

## Analysis of the Moderating Effects of Goal Recognition

Goal Recognition	Self Reward					Standardized Regression Coefficients	
	4.97	5.35	5.74	6.12	6.50	r	r <sup>2</sup>
2.37	5.36	5.53	5.69	5.86	6.03	.415	.17
3.14	5.13	5.33	5.53	5.74	5.94	.501	.25
3.92	4.90	5.14	5.37	5.61	5.85	.587	.34
4.69	4.67	4.94	5.21	5.49	5.76	.674	.45
5.46	4.44	4.75	5.05	5.36	5.67	.761	.58
Change						.346	.41

$$\hat{y} = 5.28 + .118x - .884z + .158xz$$

Table 6

## Analysis of the Moderating Effects of Performance Recognition

Performance Recognition	Self Reward					Standardized Regression Coefficients	
	4.97	5.35	5.74	6.12	6.50	r	r <sup>2</sup>
2.42	5.22	5.36	5.51	5.66	5.80	.362	.13
3.07	5.04	5.23	5.42	5.62	5.81	.476	.23
3.72	4.86	5.10	5.34	5.58	5.82	.590	.35
4.37	4.68	4.97	5.25	5.54	5.82	.705	.50
5.01	4.50	4.83	5.16	5.50	5.83	.818	.67
Change						.456	.54

$$\hat{y} = 6.22 + .186x - 1.200z - .068xz$$

Table 7

## Analysis of the Moderating Effects of Task Interest

Task Interest	Self Reward					Standardized Regression Coefficients	
	4.97	5.35	5.74	6.12	6.50	r	r <sup>2</sup>
4.29	4.94	5.09	5.24	5.39	5.53	.365	.13
4.84	4.95	5.12	5.29	5.46	5.63	.418	.17
5.39	4.96	5.15	5.34	5.53	5.72	.472	.22
5.94	4.97	5.18	5.39	5.61	5.82	.526	.28
6.49	4.97	5.21	5.44	5.68	5.91	.580	.34
Change						.215	.21

$$\hat{y} = 5.16 + .103x - .497z - .057xz$$

Table 8

## Analysis of the Moderating Effects of Task Identification

Task Identification	Self Reward					Standardized Regression Coefficients	
	4.97	5.35	5.74	6.12	6.50	r	r <sup>2</sup>
4.85	4.90	5.03	5.16	5.30	5.43	.324	.10
5.36	4.93	5.09	5.25	5.41	5.57	.391	.15
5.88	4.97	5.15	5.34	5.53	5.71	.458	.21
6.39	5.00	5.22	5.43	5.64	5.86	.526	.28
6.91	5.04	5.28	5.52	5.76	6.00	.593	.35
Change						.269	.25

$$\hat{y} = 6.21 + 138x - .620z - .327xz$$

Table 9

## Analysis of the Moderating Effects of Product Identification

Product Identification	Self Reward					Standardized Regression Coefficients	
	4.97	5.35	5.74	6.12	6.50	r	r <sup>2</sup>
3.78	5.14	5.33	5.53	5.72	5.91	.476	.23
4.40	5.01	5.23	5.45	5.66	5.88	.531	.28
5.02	4.89	5.13	5.37	5.60	5.84	.587	.34
5.63	4.76	5.02	5.28	5.55	5.81	.642	.41
6.25	4.64	4.92	5.20	5.49	5.77	.698	.49
Change						.222	.26

$$\hat{y} = 5.20 + .195x - .675z + .143xz$$

Table 10  
Intercorrelations of the Moderators and  
the Organizational Characteristics

Organizational Characteristics	Moderators		
	Task Interest	Task Identification	Product Identification
Variety	.52**	.33**	.23
Novelty	.69**	.41**	.28*
Skill Utilization	.26*	.33**	.07
Skill Development	.31*	.24	.25*
Internal Status	.28*	.26*	.05
External Prestige	.20	.39**	.35**
Social Worth	.33*	.20	.23
Authorship	.41**	.32*	.18
Influence on Results	.23	.14	.11

\*  $p < .05$

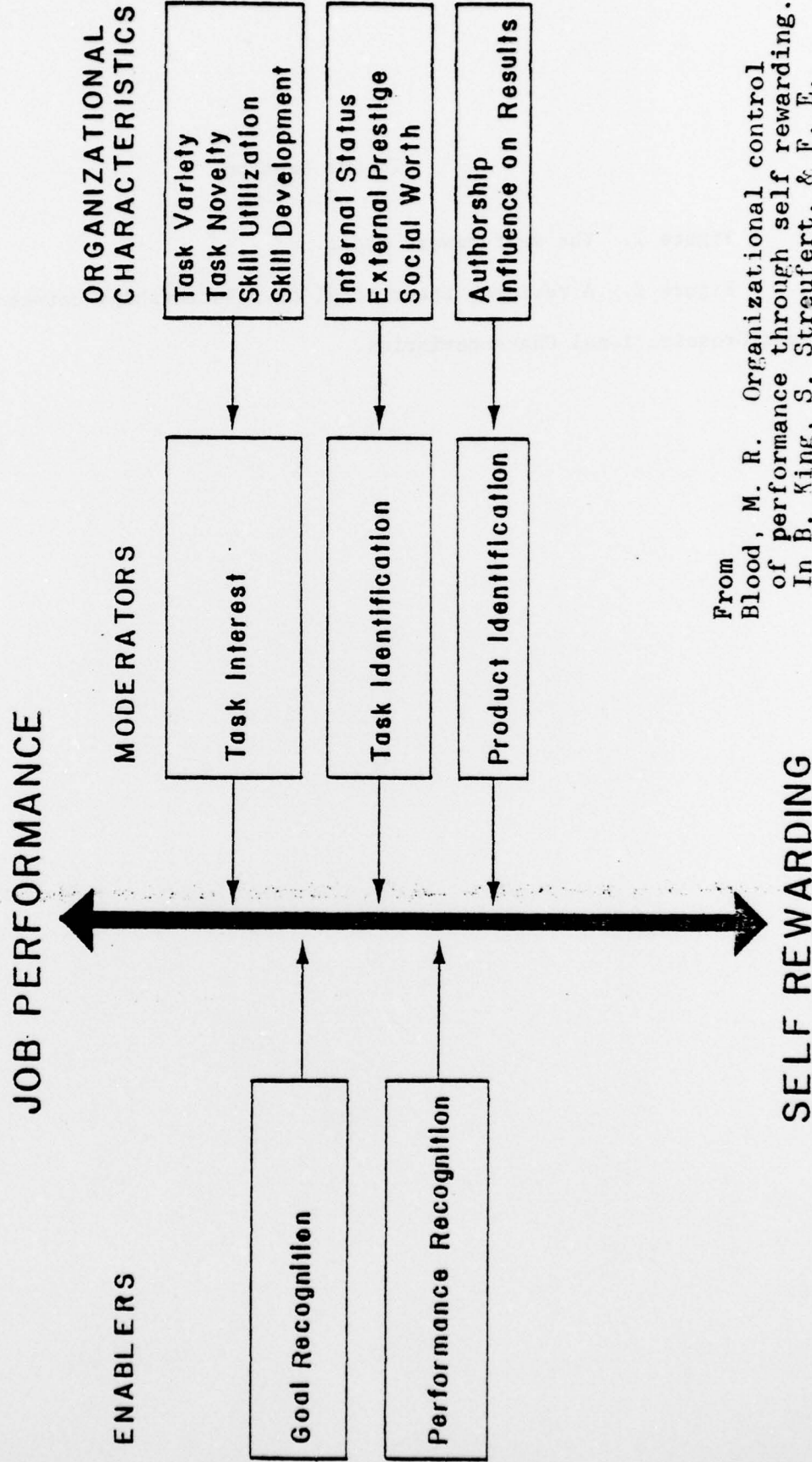
\*\*  $p < .01$

Figure Captions

Figure 1. The self-reward model.

Figure 2. A revised, freer model of relationships between Moderators and Organizational Characteristics.

# ORGANIZATIONAL INFLUENCES ON THE SELF REWARDING - JOB PERFORMANCE RELATIONSHIP



From  
 Blood, M. R. Organizational control  
 of performance through self rewarding.  
 In B. King, S. Streufert, & F. E.  
 Fiedler (Eds.), Managerial control  
 and organizational democracy.  
 New York: Halsted, 1978.

Figure 1

# ORGANIZATIONAL INFLUENCES ON THE SELF REWARDING - JOB PERFORMANCE RELATIONSHIP

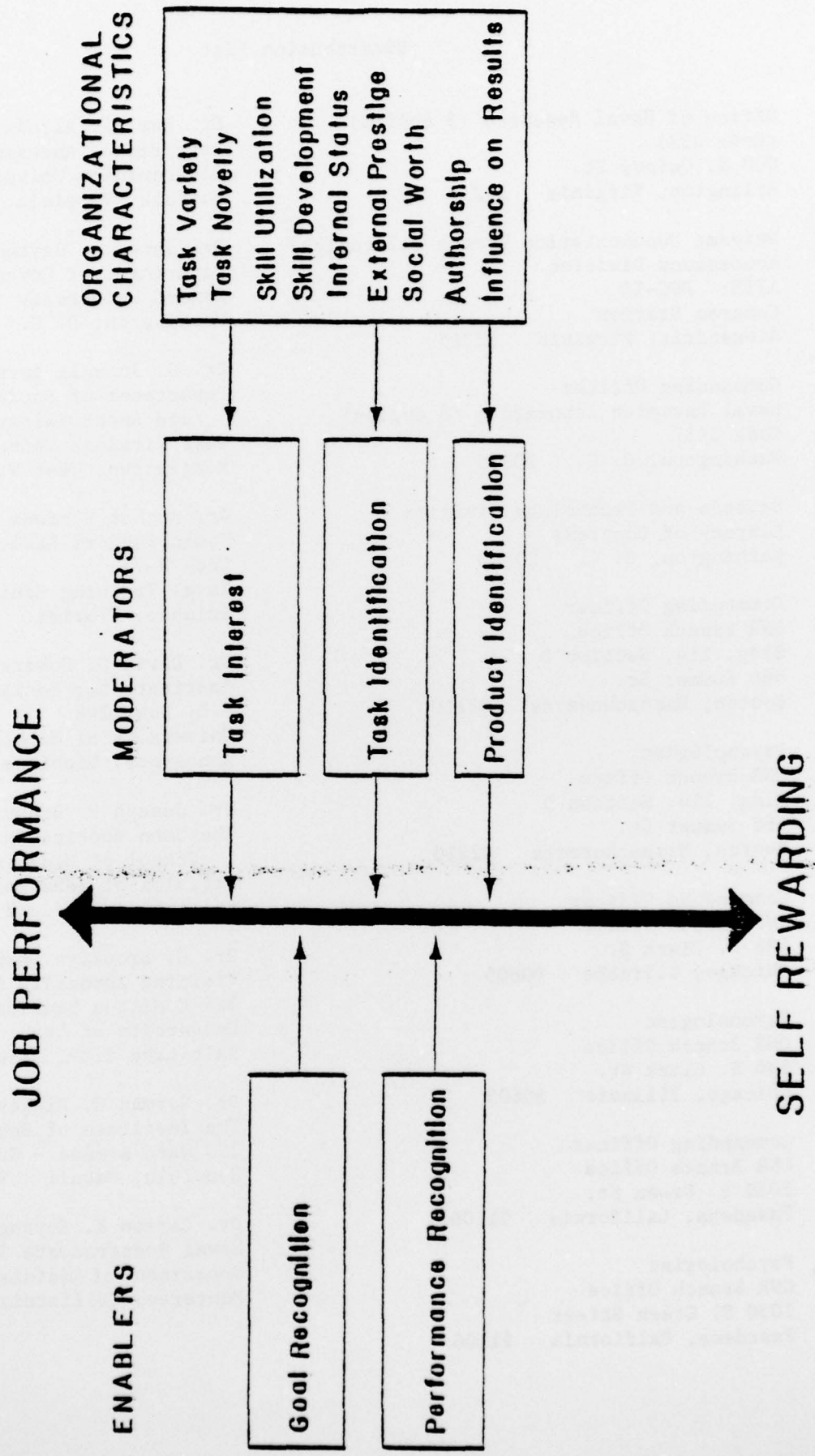


Figure 2