DOCUMENT RESUME

ED 200 171 HE 013 663

AUTHOR Bess, James L.
TITLE The Social Psychology of Commitment to College Teaching.
PUB DATE [79]
NOTE 71p.; Parts of a paper presented at the Annual Meeting of the American Association for Higher Education (Washington, DC, March 1979).

EDRS PRICE MF01/PC03 Plus Postage.
DESCRIPTORS Affective Behavior; Behavior Modification; Behavior Theories; *College Faculty; Feedback; Higher Education; *Job Satisfaction; Need Gratification; Personality Theories; Productivity; Professional Recognition; Psychological Characteristics; Psychological Needs; Self Actualization; Student Teacher Relationship; Teacher Behavior; Teacher Evaluation; *Teacher Morale; *Teacher Motivation; *Teaching (Occupation); *Work Life Expectancy

ABSTRACT

The social science literature, particularly in psychology, that may relate to faculty satisfaction, motivation, and commitment to teaching is reviewed. The question of satisfaction from work and its relation to motivation, a topic of controversy in the field (Greene, 1972) is examined, and the concept of motivation is briefly described from four perspectives: need/drive theory, expectancy theory, behaviorist theory, and flow theory. The important connections between these four perspectives and the concepts of intrinsic and extrinsic motivation are addressed. The impact on the psychology of the motivation to teach and the relatively newer notions of Csikszentmihalyi (1975, 1978) are analyzed. It is suggested that faculty must be taught how to apprehend the latent satisfactions in the teaching profession, the noninstrumental activities that are nonetheless critical to the sense of work worth doing. New ways of conceiving of teaching and its satisfactions are introduced. The contexts for understanding these new modes come from the literature of psychology. An attempt is made to show the relationships among productivity, satisfaction, and feedback as well as the conditions that may bear on those variables. In institutionalizing a feedback system, not only must instructors receive more feedback to maximize their satisfactions and productivity, but students and faculty who provide the feedback must also have feedback of their own. If feedback is seen as valuable it will more likely continue and the communication process and channels will be institutionalized. (SW)

The Social Psychology of Commitment to College Teaching

James L. Bess

Parts of this paper were presented at the annual National Conference of the American Association for Higher Education, Washington, D.C., 1979

The Motivation to Teach

Consonant with the theory that high quality performance follows at least partly from strong positive motivation, it has been suggested (Bess, 1977) that good teaching will be more likely to occur if faculty are highly motivated. Among the sources of motivation for faculty in higher education are various conditions both within an individual and in his/her environment which address the satisfactions of intrinsic and extrinsic human needs (Csikszentimihalyi, 1975; Staw, 1976; Deci, 1975). Intrinsic satisfactions would appear to be more important to sustained interest in and motivation to teach (Fisher, 1978), since teaching is a "professional" occupation, attracting individuals whose needs for satisfactions from the work itself are more salient. The professionalization processes in graduate school tend also to accentuate these intrinsic needs. It follows that when their very basic human needs are highly satisfied through the experience of teaching, faculty will behave in ways which continue to provide them with those fundamental satisfactions.

But faculty are prevented in many ways from achieving satisfactions. Most faculty in American higher education are not trained in the "craft" of identifying cues in themselves or in their work environments which are evidence of their successful teaching and which are essential to the experience of satisfaction. Nor does the professional reward system formally reinforce good teaching--colleague praise and encouragement not being readily forthcoming for this activity. Finally, teaching well is itself fraught with extraordinary difficulties. Hence both intrinsic and extrinsic motivation to teach (or, at least, to teach well) are relatively weak. Why then do faculty continue to teach? On a simple level, because it is part of their job. At a more subtle level, they teach because they do not know how to exit the

profession (and may be unable psychologically to accept the notion that career change is both desirable and possible). Lastly and importantly, they teach because on some basic level they know that teaching does have the potential of providing some of life's most profound satisfactions.

Little empirical evidence has been collected or published with respect to these problems areas. While the literature abounds with discussions of ways to improve teaching--e.g., "speak clearly and slowly," "look at each class member directly" (Centra, 1976; Gaff, 1978; Bergquist & Phillips, 1975, 1977; Lindquist, 1978, 1979) and of modes of faculty development--sabbaticals, good teacher awards, workshops--few articles deal with intrinsic satisfactions, particularly as these may vary with age and career stage. What is needed is an intensive, diagnostic inquiry (conceptually and empirically) into the qualitative natures of the satisfactions which teachers experience. As McKeachie (1969) notes:

> Enjoyment of teaching is important not only for the enthusiasm which the professor communicates to his students but also in determining his interest in continued improvement. Both of these important values are likely to be lost if teaching becomes so routinized and depersonalized that it is no longer fun. The motivated teacher is able to respond to feedback from his students in order to achieve better and better approximations to optimal solutions to the problems of teaching. As additional information from research accumulates and as better conceptionalizations emerge, he should be able to do an even better job. (p. 239)

This paper explores the social science literature, particularly in psychology, which might bear on the question of faculty satisfaction, motivation and commitment to teaching. There are a number of key concepts in the psychology of teaching which must be analyzed in some depth. We look first at the question of "satisfactions" from work and its relation to motivation, a topic of some considerable continuing controversy in the field (Greene, 1972). The concept of motivation is then briefly described from four perspectives: need/drive theory, expectancy

theory, behaviorist theory and flow theory. The important connections between these four and the emerging clarity of the concepts of intrinsic and extrinsic motivation are then discussed. These introductory remarks are then extended in a discussion of their impact on the psychology of the motivation to teach. We explore finally in some depth the relatively newer notions of Csikszentmihalyi (1975; 1978), since these seem to have extremely important implications for teaching.

It should be stated at the outset that the bias of the paper will be obvious; hence, it might well be made explicit here. We believe that the ineffability of educational goals--those related to student achievements over a lifetime--renders them generally inaccessible to faculty as cues to their teaching productivity or quality. In addition, the present state of the art of teaching leaves some considerable doubt as to what specific teaching behaviors are desirable in specific situations. These factors make the problem of motivation problematic. In the absence of achievable goals and/or behaviors which can be perfected to yield feelings of craft competence, most faculty, we would submit, normally lose their motivation to teach. External incentives are not adequate substitutes for internal satisfactions. Indeed, they may be deleterious to them. Given these constraints, it is our belief that faculty must be taught how to apprehend the latent satisfactions in the teaching enterprise--the flow of non-instrumental activities which are nonetheless critical to the sense of work worth doing. That we have given too little attention to these activities is obvious. The concepts do not appear in the literature on teaching. In this paper, we hope to introduce some new ways of conceiving of teaching and its

satisfactions. The contexts for understanding these new modes come from the literature of psychology as it is discussed in the sections which follow.

Motivation Defined

As noted above, the question of motivation is a complicated one (cf. Staw, 1977; Madsen, 1974; Campbell & Pritchard, 1976), and it is not the purpose of this paper to explore in depth its many theoretical dimensions. It will be necessary, however, to identify briefly the key theoretical approaches to the understanding of motivation in order to see how they bear on faculty teaching dispositions.

It is fairly common to find in the literature on motivation the notion that there are two or three essential components in motivation (Miskel, 1980). The first has the function of energizing behavior -- i.e., releasing energy which impels the organism to act in certain ways. Within each individual are a variety of forces -- e.g., proprioceptive, glandular, feelings -- which stimulate activity. A second component serves to direct behavior. Thus, motivation can be conceived as a force to channel activity according, for example, to drives, personalities, attitudes, beliefs, values and goals. The last component of motivation maintains the organism in its activity. For example, achieved goals satisfied needs, happy feelings, and recognition of future rewards will sustain individuals in their motivation to continue an activity.

Four important lines of inquiry need to be examined, which incorporate one or more of these components. The first is the contribution of "drive" or need theory, having its origins in Hall (1952) but better represented in the works of Maslow (1973) and Alderfer (1972). The second is the collection of works bearing on incentives or "expectancies" in the Lewin (1951) tradition, as suggested by Vroom (1964) and Lawler and Suttle (1973) particularly as these

are informed by "equity theory" (Blau, 1964). The third is the behavorist theory of Skinner (1971, 1974) and his followers. The fourth realm of inquiry concern with motivation has yet to reach the organizational literature in any volume (but see Cohen and March, 1974), though it has many antecedents in research in psychological laboratories. This is represented in the work of Csikszentmihalyi (1978), Dewey (1958), and Maslow (1971) which have more of an affective orientation, avoiding some of the attributions of cognition and intention to basic drives or to learned needs and goals which characterize the first two categories, or to the connectionist and requirements of the behaviorists. This last approach (the "flow" theory) involves an analysis of "non-directed" activity and the rewards from it (a domain new to the usual considerations of the motivation to teach).

Intrinsic and Extrinsic Motivation

Importantly, the contribution of each of the four approaches requires understanding of the ways that each views the distinction between intrinsic and extrinsic needs (Day, Berlyne and Hunt, 1971; Deci, 1975; Herzberg, 1966), of their sources, and of the means of satisfaction of each in the environment. Intrinsic motivation refers to activity of an individual which appears not to be related to any external reward--a person behaves in a particular way because of his relation to the activity itself. It cues him to seek new challenges to test his competence for continued achievement at present valued levels. Extrinsic motivation describes activity which is performed because it has some instrumental value related to an outcome or reward different from that directly connected to the activity itself (Deci and Porac, 1978).

From the perspective of need theory, so-called "lower order" needs are satisfied extrinsically, commonly through specific referents in the environment. Thus, food satisfies hunger, and the act of eating is said to be externally motivated. Higher order needs, such as self-esteem, frequently

do not have such clearly identifiable referents and have a longer time dimension associated with their satisfaction. The latter stems from the performance of activities themselves--e.g., the arousal of pleasurable feelings of competence or achievement.

From the perspective of the second approach--expectancy theory--"cognitively" known goals energize activity. The bias of this theory is in the direction of considering almost all behavior as extrinsically motivated, since each goal is presumed to have an outcome with differential valence known to the actor. Past reinforcements are not relevant to behavior according to the theory, except insofar as they serve to build up expectancies.

Behaviorist theory also blurs the distinction between intrinsic and extrinsic motivation. In contrast to expectancy theory, it suggests that all activity is conditioned by reinforcements derived from past activity--goals and feelings as motivators being illusions foisted on and by human beings. From this viewpoint, both the intrinsic satisfactions of work and the extrinsic satisfactions from the rewards of the outcomes of work are motivating through their connections to prior efforts (Skinner, 1974).

The final perspective, flow theory, suggests that, if some of the latent (unintended/unanticipated) conditions of common behavior can be reconceived as challenging, the activity can be perceived as intrinsically rewarding.* Hence, activity or roles which may not be as readily amenable to challenge can still have some "micro-flow" aspects of them which produce intrinsic satisfactions.

A tabular presentation of these theories follows:

(Insert Exhibit I about here)

*Note: This modifies somewhat the approach of Csikszentmihalyi (1978).

Exhibit I

Relation of Motivation Theory to Intrinsic/Extrinsic Conceptualization

Type of Theory	Primary Energy Source	Relation to Intrinsic/Extrinsic Motivation	Location of Arousal Cue
Need	Innate Drive	Some intrinsic, Some extrinsic	Some internal Some external
Expectancy	Goal With Valence	All extrinsic	All external
Behaviorist	Reinforcement Contingencies	None	All internal
Flow	Feelings	None	Combined internal and external

Much of the literature describing empirical studies of intrinsic and extrinsic motivation and their correlates is concerned with the effects of both on quantity and quality of performance and on satisfactions (Guzzo, 1979; Fossum, 1979; Wimpiris & Farr, 1979). A particularly salient question in these studies is the degree of independence of intrinsic and extrinsic motivation (the "attribution theory" debate). Thus, the issue is raised of whether in the presence of positively contingent external rewards (e.g., bonus money) for improvements in quantity of output, there will be a lessening both of concern for quality of output and a reduction in the level of intrinsic satisfaction. As Staw (1977) notes:

> The self-perception theory predicts that in situations of insufficient justification, the individual may cognitively reevaluate the intrinsic characteristics of an activity in order to justify or explain his own behavior

Thus, for example, persons who perform exciting and stimulating jobs voluntarily will, when offered external rewards (money) for that work, tend to undervalue the intrinsic satisfactions they had been deriving. The external reward would have been sufficient enough to motivate the behavior; hence, these persons would come to believe that they were actually working for the money itself. Staw and others report that the direction and degree of change in interest in work itself is in part a function of the levels of interest at the start.

Unfortunately, most of the empirical studies and discussions in this area are based on laboratory experiments using college students as subjects engaged in tasks which offer little challenge to learned skills and competencies (e.g., Pritchard et al.) Intrinsic satisfactions and motivation are artifically generated through "job enrichment" and "job enlargement" programs

simulated in the laboratory. The literature, in short, must be viewed as of limited value in the understanding of the nature of the "professional" motivation and satisfaction which might be found in college professors. This is not to say that the subject of intrinsic and extrinsic motivation is unimportant. It has an important bearing on how "commitment" to teaching can be enhanced.

For example, for faculty already seeing the teaching role as intrinsically rewarding, extrinsic rewards may tend to reduce intrinsic motivation. For other faculty who have come to see teaching as dull and monotonous, there is a tendency to adjust the perception of the task to explain it in more stable terms. The faculty member may, when asked, indicate that the task is really more intrinsically satisfying than it realy is.* Perhaps more important, faculty who are induced by external rewards to perform teaching tasks by will tend to look for extrinsic satisfactions, thereby depriving them of a prime source of work motivation--and, indeed, restricting their commitment to and (we would submit) their creative involvement in teaching.

As noted earlier, it is the thesis of this paper that the enhancement of awareness of the feelings generated from the satisfactions of intrinsic needs is a key to greater faculty commitment or motivation to teach and ultimately to the quality of that teaching. It is of some interest that recent research in laboratory (Deci and Porac, 1978) and other settings (Ronen, 1978) indicates that extrinsic rewards (or at least external rewards), instead of improving motivation, may in fact be deleterious to it (DeCharms, 1968), expecially to the motivation to take risks or to opt for more difficult goals (Gorn and Goldberg, 1977). The motivation model adumbrated here as an heuristic for exploring the ways to improve teaching is thus as follows. We are suggesting that human beings

*Accounting in part for faculty confusion on this subject--they say it is intrinsically satisfying, but do not feel it.

(e.g., faculty) are to some extent driven by innate human
tioned by social and cultural circumstances to desire obj
ment, and are "cued" both to change the level of their dr
certain outcomes or rewards (valence) by ongoing social c
contingent reinforcements. Importantly, they are also cu
generated in response to their behavior, be those feeling
excitement, satisfaction, or contentment. To the extent,
both perceived and cognized -- i.e., to the degree that i
"feelings" cue the ongoing behavior -- satisfaction does
part in motivation. Satisfaction is related to productivi
engaged in is of a certain kind. In the words of Csiksze

> ...Potentially present in everyday life there are
> sources of reward that, if discovered, can serve t
> behavior and provide enjoyment. If true, the impl
> this finding are immensely important.
>
> We have to learn how to derive enjoyment from life
> we have to learn how to structure experience so as
> it rewarding without taxing the closed reward syst
> has been kept artifically limited through ignoranc
> political design.

Intrinsic reward can be found in almost any situation. C
suggests "the essential requirement seems to be that the
'provide information to the person that his or her action
of challenges in the environment.'"

The "experience" of intrinsic satisfaction can thus
and non-cognitive one. On the one hand, there may be con
a person to be aware of and indeed to exult in the experi
This might be termed an "active voice," the experience of
ing to what Dewey (1934) calls "having an experience" (p
experiences are viewed as aesthetic). For Dewey, however

application of intelligence to social problems which allows a kind of satisfaction which is derived from the wholeness of an experience. As Roth (1962) notes, "The individual is aware not only of what he is but also of what he might become" (p. 131); or in Dewey's words, "We are carried out beyond ourselves to find ourselves... the whole is felt as an extension of our selves" (1934, p. 195).

On the other hand, some pleasures (e.g., in teaching) may be experienced more passively, though nonetheless intensively. Thus, in a more Eastern tradition, one might imagine persons letting in the "flow" of events and feelings. Here the satisfaction is intrinsic (it has no apparent associated external reward), but it does not derive from the same kinds of seeking for "congruity" that is usual for intrinsically motivated activity. That is, it does not appear to be related to either seeking new levels or standards for achievement, nor to the attempt to reach those levels.

It is important to interject here that the separation of cognitive appreciations and affective ones or the dualistic consideration of present and future or fact and value are somewhat arbitarary--noted here for purposes of conceptual clarity. Means and ends are inextricably intertwined. Fact and value, reason and emotion, thinking and feeling are experienced both conjointly and, paradoxically, sequentially (cf. Simon, 1957, p. 63, 74; Dewey, 1916, p. 124). As McDermott (1973, p. 433) notes:

> The all-important point then in the consideration of mediate interest or voluntary attention is the kind of relationship which exists between the putting forth of energy considered as means, and the idea or object to be reached considered as end.

> If the two fall apart, if the means are not identified with the end, interest is not really mediated. The intervening steps are regarded simply as necessary evils to be gotten over with as soon as possible for the sake of the final outcome.
>
> Here self-contradiction emerges. If the interest is wholly in the end and not at all in the means, there is nothing to insure attention being kept upon the means, and hence no way to guarantee the reaching of the end... The break in interest between means and end marks, in other words, a break in the self.
>
> On the other hand, if the means are recognized truly as means ...then the full interest in the end is at once transferred to the so-called means. For the time being that becomes the end.

We will discuss the notions of "flow" at some length below, but first it will be useful to explore in somewhat greater depth the nature of the concept of "satisfaction" and then of the relationships among motivation, satisfaction and productivity.

Job Satisfaction

The satisfactions one derives from one's work are difficult to separate from those which are important in life itself. As Freud noted, work and love constitute the main sources of healthy personality. While there are other settings in which one finds important satisfactions (home, avocation, sport, etc.), we concentrate here on the academic work environment.

Satisfaction with work is conceived as both a highly valued state from an abstract ethical perspective and as a desideratum from the perspective of the employer. In the first instance, satisfaction, as defined by Locke (1976) is "a pleasurable or positive emotional state resulting from the appraisal of one's job or job experiences" (emphasis added).* While job dissatisfaction is not necessarily bad for an individual, (in the sense that it causes functional adaptive behavior -- Seashore, 1975), we would submit that sustained job

*Note that this definition relies on a self-conscious state, a point we return to later.

dissatisfaction of aggregates of employees is a condition of an organization which describes an unhealthy quality of working life. That is, when large numbers of workers are suffering from anxiety, excessive tension, depression, and other forms of unhappiness associated with their work situation, we can assume that some conditions in the work are the cause. We view such a condition as lacking in positive social value. Organizations, in other words, have an obligation to their employees to attend to employee satisfaction as a desired end, quite apart from its relationship to organizational ends (cf. Argyris, 1964).

The connection of worker satisfaction to productivity is not easily established. Studies show that job dissatisfaction is related to greater turnover, heart disease, absenteeism, and morale, but organizational productivity, at least in the short run, is not necessarily affected. Unfortunately, most studies of the correlations between satisfaction and productivity have been conducted in manufacturing organizations. Little empirical evidence has been assembled for workers in service industries, particularly in the field of education. We would submit that where the work is professional in nature, particularly when it involves contact with younger persons, the consequences of job dissatisfaction for the achievement of organizational goals will be more pronounced. The greater the aggregate dissatisfaction, the lower the institutional productivity. In the long run, for example, young persons who are in frequent contact with faculty who are dissatisfied with their work will not be facilitated in their growth and development toward more educated and mature states, one of the aims of most educational institutions.

In this paper, we make the assumption with Seashore (1975) that at least 40% of the satisfaction experienced by a faculty member is attributed to

characteristics of the objective situation, another 30% stems from idiosyncratic characteristics of the person which are relatively stable and long-term, 20% fluctuates according to short-term moods and other personality conditions, and a final 10% cannot be tra ed. Since our central concern is both with the improvement of teaching and the quality of faculty working life, we will be dealing in the paper with the first 70% which are more readily amenable to manipulation by the organization and the individual. We will attempt to identify the conditions in the enviornment and the conditions in the individual which affect faculty satisfactions, conceived, as above, as feeling states. On the one hand, we will look at these states as ends in themselves and, on the other, as sources of motivation to teach better. As noted earlier, the notion of "feelings" as apprehendable cues to motivation conflicts with some current theoretical perspectives, but we will try to defend this position.

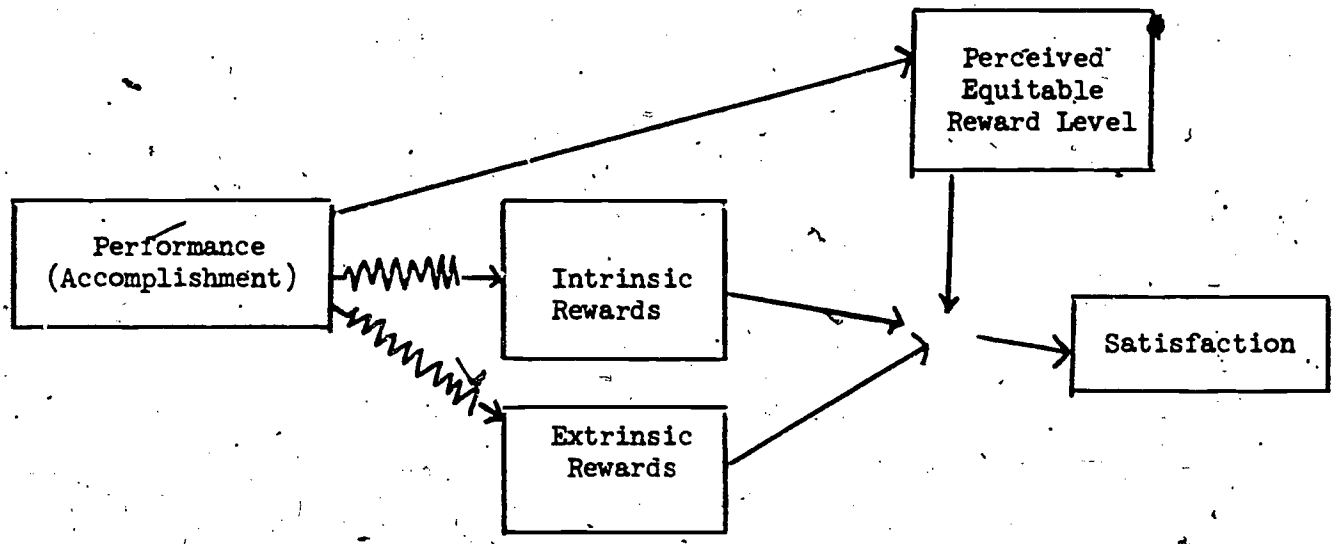
Productivity, Satisfaction and Motivation

At the risk of complicating the issue somewhat more, it is necessary at this point to clarify the relationships among motivation (in the four modes discussed earlier) and "satisfaction". As proposed by Lawler and Porter (1967), productivity and satisfaction are related through the availability of intrinsic and extrinsic rewards as these are perceived to be "equitable":

(Insert Exhibit II about here)

Exhibit II

Model of the Relationship of Performance to Satisfaction*



* From Lawler, Edward E. and Lyman W. Porter, "The Effect of Performance on Job Satisfaction," Industrial Relations, 1967, 7, 20-28.

While this model has the advantage of simplicity, by its emphasis of cognition (perception of equitability), it ignores, in part, the fourth kind of reward which stems not from accomplishment or its job contingent reward by-products (either intrinsic or extrinsic) but from process--the autotelic reinforcement from ongoing flow activity. At the end of this paper we will present an alternate model which includes this important source of satisfaction.

The introduction of the concept of equity by Lawler and Porter did, however, inform the discussion of the relationship of satisfaction and productivity. As Lawler (1973) notes, "...it is hard to understand why the belief that high satisfaction causes high performance was so widely accepted. There is nothing in the literature on motivation that suggests this causal relationship." "Clearly, a more logical view is that performance is determined by people's efforts to obtain the goals and outcomes they desire, and satisfaction is determined by the outcome people actually obtain" (p. 84). The problem with this statement is that it seems to ignore the relationship between equity (conceived by Lawler and Porter as satisfaction) and motivation. The ambiguity arises because of the failure of the model to specify the feedback loops which provide stimuli to the three motivational energy resources noted above which reside within the individual. In the absence of a continued sense of equity, a person will clearly be less motivated to produce at high quality levels, since outcome standards must be adjusted to adjudicate the incongruity. More plainly, if one is not satisfied, one either improves performance up to the desired level or reduces the desired level (cf. March & Simon, (1959). The statement is also problematic in that some persons (particularly in the the teaching profession) do achieve quite high levels of satisfaction from activities which are not necessarily goal motivated--or where those goals are ineffable.

In sum, as will become increasingly clear in this paper, we believe there are sound reasons for believing that the connections between satisfaction and motivation to produce are strongly positive and interactive. The basis of our belief that teaching can be improved through the development of a vigorous "commitment" of faculty to the enterprise is the notion that satisfaction leads to performance and that both lead to commitment. As we will reiterate frequently below, a seemingly neglected source of satisfaction for faculty lies in their own positive feelings which arise in the course of their work (not so much as those feelings are intimately related to the doing of the work but insofar as they co-exist with the work).

The connections among feelings and work also are not fully articulated in more contemporary theories. Subsequent to the development of the Lawler and Porter model, the theoretical and empirical studies of the relationships among productivity, motivation and satisfaction have been explored by Hackman and Oldham (1975, 1976) through their "job characteristics model" (cf., Evans, Kiggundu & House, 1979). The theoretical perspectives of this model ignore cognition (or assume it), turning instead to "critical psychological states" which are determined by "core job dimensions" and which lead to various outcomes. Included among these outcomes are all three of the variables of concern in this paper -- high internal work motivation, high quality work performance, and high satisfaction with the work. The strength of the relationships among job dimensions, psychological states and outcomes is alleged to be moderated according to the strength of an individual's "growth needs". Hence later developments of the model turn at least in part on "need theory" as a signifignt motivating force. Importantly, the job characteristics model allows the researcher or job designer to estimate for any job its "motivating potential" for any individual.

It is interesting to speculate on the motivating potential of the work of teaching in general. The core job dimensions hypothesized to lead to the critical psychological states are skill variety, task identity, task significance, autonomy, and feedback. While a number of skills are apparently necessary to successful performance in teaching (Bess, 1981, in press), in fact, faculty use relatively few, and in the absence of continuing task challenge (emphasis missing from the Hackman and Oldham model), they resort to time worn and repetitive repertories of teaching behaviors.* "Task identity" requires that the work incorporate a "whole", or identifiable part of it -- e.g., the "whole" student. Yet, in most colleges and universities, faculty rarely identify with the student as a complete person. They see the student in a class with others two or three times a week for an hour or so, during which time faculty largely transmit information. The contributions of other faculty to the "wholeness" of the student is difficult to perceive; hence, each faculty member is prevented from seeing how his/her contribution enters into the growth "equation" for student development and education. As to task significance, the third core job dimension, faculty also are constrained not to see the effects on their students. This is in part due to the delayed nature of those effects -- students may not evidence learning and change until well after the interaction with the faculty member. Occasional adulatory letters from some students to the contrary

*Of interest is the speculation of Evans et al. (1979) that when the variety of skills required in a task is very high, the task will appear ambiguous and the appropriate technology for the successful application of the skills will not be clear.

notwithstanding, faculty usually must take on faith the significance of their contribution to students.

As to autonomy, faculty have plenty. Indeed, while Hackman and Oldham allege that the more autonomy there is in the job, the more the worker experiences a sense of responsibility for outcomes, other research (Pelz & Andrews, 1966) suggest that too much autonomy is dysfunctional in some professional settings. Finally, the core job dimension of feedback is also problematic for faculty. The well-known metaphor of hitting golf balls into the fog may well apply to the teaching situation. Although some faculty assiduously collect information about their performance, and others have it done for them through required student evaluations, it is rare that clear and direct results on teaching effectiveness reach the faculty member with consistency and reliability. In sum, using the Hackman and Oldham model, there is good reason to believe that faculty may be deprived of the opportunities to achieve the critical psychological states necessary to the desired outcomes of motivation, productivity and satisfaction.

Needs and Drives

Any understanding of the relationship between satisfaction and motivation must involve the four sources of motivation noted earlier: drives, expectancies, reinforcements and feelings, each of which creates the impulse to behave in certain ways.

An important distinction, however, is in the location of the cues or stimuli which are related to each. Drive strength can be reduced through the provision of changes in the actor's environment (Madsen, 1973). Needs, too, are rendered more or less salient depending on the availability of contingencies in the environment which are responsive to them. As we will argue later, it will be useful to consider ways in which satisfaction using this model can be facilitated through the use of "stimulus generalization" training efforts--in effect, demonstrating to faculty other facets in their teaching environments which have related capacities for satisfaction of basic needs.

A distinction is made between human needs which have been socially or genetically conditioned into pathologies (neurotic anxieties brought on by fears) and those which have "healthy" characteristics. We are concerned here only with the latter -- with, in other words, those natural growth tendencies inhering in all human beings and which when satisfied yield positive feelings. These needs are frequently considered "developmental," in that successful management of higher or later stages in the sequence depend on the adequate solution of problems encountered earlier. Satisfactions of neurotically induced needs, on the other hand, result only in the temporary reduction of tension and are of less interest here. The dichotomy bears a resemblance to Herzberg's two-factor theory (Herzberg, 1966) in that the satisfaction of neurotic needs has little direct effect on the sense of fulfillment of healthy needs, except insofar as neuroses interfere with normal functioning. The thinking is also not unlike Maslow's notion that a gratified need no longer motivates--it releases the organism to attend to higher order needs.

We will argue here that need theory in its developmental perspective is of considerable value in planning for the improvement of faculty motivation. The classroom and other teacher-student settings represent opportunities for need satisfaction of a profound sort. Faculty at various stages of life and career (Hodgkinson, 1974; Bess, 1973; McKeachie, 1979) find themselves driven to seek satisfactions related to their needs for giving, caring, and passing on generational wisdom. Seldom, however, are they sufficiently aware of the strength of these needs, nor of the sources of their satisfaction in the teaching environment. From the perspective of need theory, then, faculty developmental efforts could be addressed to the raising to consciousness for each faculty member his or her salient developmental needs and the relevant need-environment contingencies related to their satisfaction.

While developmental conceptions of human needs are of use, so also are the more general perspectives of need theories which belong to the "humanistic" school. Maslow's (1962) hierarchy of human needs is now well known in the organizational theory literature, and we will not discuss it at length here. Basically, the theory proposes that human needs are arranged in a hierarchy of prepotency, including physiological, safety, belonging-love, ego and self-fulfillment needs (cf. Alderfer, 1972, whose views on the hierarchy differ somewhat). Arguing that a need once satisfied no longer motivates, Maslow suggests that human growth depends on the prior satisfaction of lower-order deficiency needs. To the extent that organizations require commitment of the more creative aspects of their employee's psychological make-up, it can be argued that organizations must find ways of satisfying lower order needs first, thereby freeing their workers to become involved at higher ego and fulfillment levels. From this perspective of needs, then,

faculty development efforts would be concerned with understanding fully the variety of faculty physiological, safety and belonging needs. For example, the profound needs for order and stability that some faculty seek to satisfy in the classroom often interfere with student growth and development (not to speak of faculty satisfaction of higher order needs). Understanding these needs as "safety" needs might suggest ways of addressing them in different ways, which are both educational for students and growth oriented for faculty.

Goals and Expectancies

If most need theories take a universalistic perspective on human motivation, expectancy theory addresses the problem in a more particularistic manner, treating *each* individual's motivation as a function of his/her weighing of alternatives at a particular time and place. Expectancy theory presumes a cognitive association between perceptions of probable outcomes and motivation. It is useful, therefore, to discuss briefly the goals most faculty have been shown empirically to seek in their classrooms. By far the majority have as their primary classroom goals the transmission of knowledge. When pressed in interviews or questionnaires to indicate their "educational" goals, however, they are likely to be somewhat more expansive, though the connections between their classroom behavior and those longer-range desirata are rarely made explicit. Typical of goals espoused by faculty are the following:

(Insert Exhibit III about here)

Clearly such goals will be held in different rank orders by faculty with different dispositions and especially from different disciplines (Kelly and Hart, 1971; Thompson, Hawkes and Avery, 1969; Lodahl and Gordon, 1972; Biglan, 1973; Smart and Elton, 1975). The "educational" goals noted in

Exhibit III

Rank Order of Undergraduate Teaching Goals 1973*

Goals	Percent of Faculty Who Hold Goal	Rank
To develop the ability to think clearly	95.4	1
To master knowledge in a discipline	91.4	2
To increase the desire and ability to undertake self-directed learning	89.4	3
To develop creative capacities	78.0	4
To prepare students for employment after college	60.7	5
To develop responsible citizens	57.4	6
To provide tools for the critical evaluation of society	57.3	7
To convey a basic appreciation of the liberal arts	55.1	8
To achieve deeper levels of students' self understanding	54.9	9
To prepare students for graduate or advanced education	53.8	10
To provide the local community with skilled human resources	46.0	11
To develop moral character	44.6	12
To develop and pursue research	43.4	13
To provide for students' emotional development	38.2	14
To prepare students for family living	20.1	15
To develop religious beliefs or convictions	9.3	16

*Taken from Platt, Parsons and Kirshstein (1976).

Exhibit III are, of course, quite different in quality from the short pedagogical objectives for a course and are outside of the usual fram in which classroom activities are planned. Tangible faculty objectiv such as student mastery over course material, almost always displace more intangible goals (Warner and Havens, 1968). Importantly, howeve is the achievement of these more qualitative and long range education objectives that can provide important satisfactions for faculty. Unf ly, faculty rarely discuss these kinds of goals, let alone operationa them in planning and executing their teaching. The philosophic, educ and organizational contexts in which course and classroom objectives do not usually enter into faculty considerations in planning their wo

There has been relatively little research addressed to the quest how institutional goals become translated into "task" goals. (through Lawler, & Hackman, 1975, pp. 83ff.) What has been found empirically "the act of setting clear goals on an individual's job (as opposed to broadly defining his areas of responsibility) does generally result i increased performance" (Steers and Porter, 1974). The research shows that goal specificity and performance are consistently positively rel empirical studies. There is, however, no agreement on the precise wa which such goal setting and the degree of specificity affects motivat The act of setting goals may itself be a source of motivation, since involves a person in a process which may later find reinforcement. Lo specificity of goals may, however, be more appropriate for profession where objectives are to be achieved over a longer period of time.

Faculty reluctance (or lack of abilfty) to translate education objectives into pedagogical ones thus would seem likely to reduce the motivation to teach. From the perspective of expectancy theory, motiv is a function of the expectation that an outcome will be achieved and

valence of the outcome and its rewards, as conditioned by the perceived instrumentality of the rewards to outcomes (Campbell & Pritchard, 1976). On the one hand, faculty may substitute narrow pedagogical goals for educational ones (which may or may not be related to one another), but given the ambiguity of the correlation between outcomes and rewards (e.g., is good teaching consistently rewarded?), the valence is uncertain, and they are unlikely to become highly motivated, or even to sustain existing levels of motivation. Moreover, even when (however seldom) pedagogical goals are clearly stated and institutional rewards for effective teaching are forthcoming, faculty themselves are unable to determine the probability of achieving their goals. Few faculty receive training in evaluation, and while student performance on examinations may reveal something about meeting pedagogical goals, such achievements are evident only when the goals are so simplistic as not to be very psychologically meaningful to faculty.

Faculty difficulty in identifying progress of students toward these longer run objectives is in small part, perhaps, a result of the lack of research attention paid to this problem. Relatively little empirical study has been reported in this area. While measurement of student outcomes has now become a sophisticated science (Lenning et al., 1977), the connection of outcomes to teaching practice has yet to be sufficiently articulated. Nor is it likely to be in the near future. Given the difficulty of establishing these connections and the "natural" ineffability of educational goals, we must return to the notion that some surrogate for perception of goal achievement must be provided in order for faculty to find some satisfactions from their teaching. Again, we look to the "feeling" domain as a source of satisfaction, and we will discuss this idea in the section following the next. We turn now, however, to the third broad conception of motivation--

behavior modification--to explore its possibilities for the improvement of faculty motivation.

Behavior Modification

Behavior modification as a theory has its origins in the classical conditioning experiments of Pavlov and his early followers and later in the seminal work of Skinner. Essentially, the argument is that behavior is modified through the establishment of contingencies of reinforcement from the environment. The connections between an act and its consequences serve to direct future behavior. If the activity is positively "reinforced" (i.e., achievement of performance is rewarded), the actor will tend to repeat the activity. Under conditions of classical conditioning:

> A stimulus which is not a part of a reflex relationship (the bell in Pavolov's experiment) becomes a 'conditioned stimulus' for the response by repeated, temporal pairing with an 'unconditioned stimulus' (food) which already elicits the response. This new relationship is known as a conditioned reflex, and the pairing procedure is known as classical conditioning (Hamner, 1974).

"Operant conditioning" takes a more active view of the person's involvement in his environment. While classical conditioning theory presumed that the actor was primarily "responsive" to stimuli, operant conditioning assumes that the actor can influence the consequences of his behavior.*

> Operant conditioning presupposes that human beings explore their environment and act upon it. This behavior, randomly emitted at first, can be constructed as an operant by making a reinforcement contingent on a response. Any stimulus present when a operant is reinforced acquires control in the sense that the rate of response for that individual will be higher when it is present (Hamner, 1974).

*Some view the differences between these theoretical approaches as ill-conceived (Catania, 1971).

Conceived in this "operant" way, improvement of teaching performance means recognizing the variety of behaviors in which teachers can behave, identifying with great precision the changes in students which are desirable, and creating reinforcements which are arranged to strengthen the connections between the first two and to extinguish other connections which are not useful. From this perspective, attitudes, feelings, goals and other subjective states of mind are irrelevant. As Skinner reports:

> It is commonly said that a thing is reinforcing because it feels, looks, sounds, smells, or tastes good, but from the point of view of evolutionary theory, a susceptibility to reinforcement is due to its survival value and not to any associated feelings (1974, p. 47).
>
> There is no important causal connection between the reinforcing effect of a stimulus and the feelings to which it gives rise (1971, p. 107).
>
> Men do not work to maximize pleasure and minimize pain, as the hedonists have insisted; they work to produce pleasant things and to avoid painful things (1971, p. 107).
>
> Such a stimulus does not act as a 'goal'; it does not elicit the response (as was the case in classical conditioning of reflex behavior) in the sense of forcing it to occur. It is simply an essential aspect of the occasion upon which response is made and reinforced (1969, p. 7).

The notion that needs, goals and feelings play no part in directing behavior is not, needless to say, an uncontended one. Humanistic psychologists, in particular, find that it violates some important tenets of their own approach to motivation. It is our view that there is much of value in the theory, however, as we detail below. Its primary limitation is in the systematic exclusion of "feelings" as a response which can be reinforced in the usual ways. It is this dimension of teaching--the identification by the faculty member of his/her own feelings and the self-reward for that behavior--which point the way to improved commitment to teaching. We turn in the next section to a more explicit discussion of the nature of feelings.

Feelings

We have noted earlier the feeling dimension of teaching rewards. Let us expand somewhat on that notion now. George Leonard (1968) asserts that feelings (or in his terms, ecstasy) are not necessarily opposed to reason or order or morality. He notes:

> Ecstasy is education's most powerful ally. It is reinforcer for and substance of the moment of learning. Knowing this the master teacher pursues the light. Even those best known as great lecturers have turned their lecture halls into theaters, shameless in their use of spells and enchantments. Great men, as every schoolboy knows, have greeted their moments of learning with crazy joy" (p. 230).

Lyon (1971) notes, in addition:

> ...of the two elements in behavior, feelings are more important than the intellectual element. The fact is, the intellect divorced from feelings is empty and meaningless. An education that is to be effective in preparing a child for life must take into account emotional as well as mental development (p. 18).

Lyon goes on to describe the typical faculty member as an "inwardly focusing individual" who has feelings of intellectual superiority combined with insecurities about his own and others' feelings. Grant and Riesman (1978) refer to "telic reforms" that they have observed in scattered experiments in colleges around the country. Such reforms move in the direction of reviving the emotional component in learning (though their discussion is concerned primarily with students).

Perhaps surprisingly, published examples of faculty describing their feelings in the classroom are relatively rare. In Carl Rogers' (1969) now classic volume, we hear the genuine excitement of teaching in his words. He says:

> When I really hear someone it is like listening to the music of spheres, because beyond the immediate message of the person, no matter what that might be, there is the universal, the general. Hidden in all of the personal communications which I really hear there seem to be orderly psychological laws, aspects of the awesome order defined in the universe as a whole (p. 222).

Rogers goes on to say also that he enjoys being heard. He sees teaching as personal risk-taking, as gambling, as sharing something personal, as exposing one's psyche. Still later Rogers talks about "unleashing the freedom of others" and how much he appreciates that. Finally Rogers notes the enrichment that he feels personally when he can believe that someone cares for him and that he can love another person--when "I can let that feeling flow out to him." More particularly:

> I have come to think that one of the most satisfying experiences I know is also one of the most growth promoting experiences for the other person--is just fully to appreciate this individual in the same way that I appreciate a sunset. People are just as wonderful as sunsets if I can let them be.

Other examples of teachers feeling things in a classroom come out of the edited volume of Sheffield (1974). Here some of the authors write as follows:

> ...I have the great fortune to speak about works of beauty which take man away from the transitory.
>
> I take a few minutes before the lights are lowered to look into the eyes of the students. Some of them smile and on this on a dreadful winter day makes me think of beautiful warm places.
>
> I love an audience. Teaching provides me with one. It also offers some satisfaction of my desire to do something that I think is socially useful. Try to behave as a teacher, in ways that maximize my own satisfaction.

These expressions are just one step away from what Gaylin (1979) calls "feeling good":*

> "Feeling good" is generic and vague. Whenever questioned, any individual will find "reasons" why he feels good, but the emotion itself eludes specific cause and specific description. Lightness, buoyancy, aliveness, enthusiasm, optimism, peace, relaxation, hope, involvement--all are words that have been used to amplify the specific feeling of feeling good (p. 205).

*These might be compared with Maslow's (1971) list of "being-values--truth, goodness, beauty, wholeness, dichotomy-transcendence, aliveness, uniqueness, perfection, necessity, completion, justice, order, simplicity, richness, effortlessness, playfulness, self-sufficiency" (pp. 131-132). See also Csaky (1979).

For Gaylin, there are seven categories of feeling good, each of which may enlighten our understanding of how faculty come to experience their teaching. It is instructive to examine them here in some detail.

The first feeling is the basic and physical. People derive pleasure out of the use of their senses -- seeing, hearing, etc. As we will note later, faculty are prone to be oblivious of sights and sounds which provide profound satisfactions.

Gaylin's second category is "discovery," which "allows us by using our distance perceptors, combined with our intelligence, to produce a form of pleasure that fuses the sensate with the intellectual." (p. 208) There is a joy in the learning experience which transcends the utility of the material acquired. It is the sheer pleasure of discovery. Again, this feeling is often ignored by faculty for whom different kinds of learning in the classroom setting might bring increased satisfactions.

The third category is "expansion and mastery"--borrowing here from White's (1952) classic thesis. For Gaylin, this "sense of enlargement or enrichment" involves awareness of change--a somewhat more cognitively biased affect or feeling than those discussed earlier. It is the feeling that we have "developed" or "grown" in our capacities to perform those things which utilize our strengths and capabilities.

"Creativity" is the next of Gaylin's categories. This pleasure of making or doing in an esthetic way has been remarked by Dewey (1934):

> The existence of art is the concrete proof of what has just been stated abstractly. It is proof that man uses the materials and energies of nature with intent to expand his own life, and that he does so in accord with the structure of his organism--brain, sense organs, and muscular system. Art is the living and concrete proof that man is capable of restoring consciously, and thus on the plane of meaning, the union of sense, need, impulse, and action characteristic of a live creature (p. 25).

Insofar as teaching is an art form, it partakes of the qualitative configurations of experience which give a sense of the whole to an activity. Insofar as all activity can be considered artistic, so teaching can be said to have within it the rewards of art. Similarly craft satisfactions are available to faculty who perceive their teaching as a craft. Deliberate, careful, functional, aesthetic creation of an object or a service can provide the same sorts of motivation which are afforded to craftspersons in their professions. Indeed, the more repetitive nature of teaching lends an air of craft rather than art to the teaching profession. As Lortie (1975) notes:

> People exprience craft pride when they succeed in reaching work goals which are important to them. Knowing what occasions generate such feelings can help us to understand the objectives of members of a particular occupation. It tells us what insiders consider the more challenging aspects of their work; one is not likely to feel pride at attaining something relatively easy. When do teachers feel the glow of high achievement?

The fifth form of pleasure noted by Gaylin is "immersion." "To be totally immersed in something, to have lost the sense of time, perception, and seemingly sense of self, is obviously a joyous experience." (p. 211) Obviously akin to Maslow's (1962) "cognition of being in the peak-experiences" or "B-cognition," this feeling is one in which a person or experience "tends to be seen as a whole, as a complete unit, detached from relations, from possible usefulness, from expediency, and purpose" (Maslow, 1962, p. 70). This kind of experience is self-validating, conveying intrinsic value in and for itself. In Gaylin's colorful language, it is "like floating in water" -- having a new awareness via a novel medium (cf. Csaky 1979 a). For some, teaching, on occasion can produce such feelings.

"Fusion with people" is Gaylin's sixth category of feeling. This way of

*We leave to a later discussion the issue of how craft satisfactions can be achieved in the absence of feedback. Suffice it to say here that the creative act itself is the source of some satisfactions.

experiencing comes out of the sense of unified collective behavior, oriented toward a single purpose, united with others in common effort, ideology and intent. Too seldom is the faculty in a department or college joined in spirit and commitment toward the service goals of the teaching profession. We commonly view teaching as a solemn solitary effort and rarely share a normative consensus that might yield the feelings of fusion to which Gaylin refers.

Finally, individuals who are able to transcend day-to-day experience feel a "sense of continuity beyond existence," the identification with cosmic and universal order. This is Gaylin's seventh mode of feeling, perhaps more readily available to older, more mature faculty (cf. Levinson, 1978; Sheehy, 1976).

Gaylin expresses some surprise in the fact that people must be reminded of the existential pleasures of life. These feelings are not those connected with any particular task or role or responsibility, but simply the joy of being alive. It is the "purpose of these feelings not just to facilitate survival but to celebrate the sense of purpose and goodness in that survival" (p. 215).

Gaylin's categories of feeling are useful in understanding their role in faculty motivation, a subject to which we return below. But there are others who also treat "goal-less" activity as pleasureful, though from a slightly different perspective. Vickers (1973), for example, notes:

> Higher human motivations are concerned with sustaining relations that we value positively and avoiding relations we value negatively. The goals we seek are new opportunities for relating. The reasons why ends do not necessarily justify means is that means are activities and thus ways of relating and changing relations and demand to be judged as such, not only for their impact on the particular change which in a particular context has been defined as <u>the</u> end.

While people in Western society have a proclivity toward believing in the "preexistence of purpose," as a matter of fact, such beliefs interfere with

the achievement of some of the more profound satisfactions available in life. As March (1976) suggests, "we have...invented one of the most elaborate terminologies in the professional literature: 'values,' 'needs,' 'wants,' 'goods,' 'tastes,' 'preferences,' 'utility,' 'objectives,' 'goals,' 'aspirations,' 'drives.'" March also suggests that we are beset by the "necessity of consistency" and by a belief in the "primacy of rationality." March would have us move toward what he calls a "sensible foolishness," in which all of these preconceptions or predispositions are suspended in favor of more playful activity. "Play" has a number of positive functions: it releases emotional tensions, it relates to some mystical or spiritual principle, and it is positively enjoyable. Organizations, March asserts, must specify the best mix of play and reason or, failing that, arrange for an alternation of the two. In order to encourage people to be more playful with their conceptions of themselves, March offers five approaches:

1. treat goals as hypotheses
2. treat intuition as real
3. treat hypocrisy as a transition
4. treat memory as an enemy
5. treat experience as a theory.

The point here is that some human activity may be undirected, though not necessarily unmotivated. To increase the intensity of motivation for playful activities, special efforts must be undertaken which differ from those intended to increase the motivation for goal directed activity. These must also be differentiated from efforts to change behavior which is instrumental to goal achievement. If faculty can also employ these different and/or additional modes of experiencing their teaching, their satisfactions should increase. Again, insofar as satisfactions lead to performance, their teaching should also improve.

This general shift in orientation yields behavior which might be termed "autotelic." According to Csikszentmihalyi (1975), an autotelic activity

requires extensive formal energy output but has few if any conventional rewards associated with it (p. 10). Thus, the activity provides some kind of satisfaction, but the actor has no implicit goal nor does he differentiate in his environment those cues which are likely to provide satisfactions. The experience of the activity as a whole in some way provides enjoyment through the merging of action and awareness made possible through the structuring of the flow of activities or experiences and a centering of attention on a limited number of stimuli. Persons who can so "narrow" their consciousness are able to exclude irrelevant or intrusive stimuli (p. 40).

The question raised by Csikszentmihalyi is how to begin the process of experiencing an activity as a flow. Activities which seem to produce the flow experiences are those which provide opportunities for actions which do not seem to be boring or which do not cause worry. In the former, in other words, flow is experienced when people see their capabilities as sufficient to handle a given situation, but no greater than is required. Too many skills or too few skills or too many opportunities or too few opportunities will result in either boredom or anxiety. Thus, the teaching enterprise may have, on the one hand, too many tasks for the faculty member to feel he/she can perform competently (Bess, 1981 in press) thus causing anxiety; on the other, faculty may see their teaching roles as as providing too few opportunities to allow challenge, thus causing boredom.

But these expressions of emotion seem to be related to intentional activities in the classroom, however consumatory they may be. Csikszentmihalyi (1975) suggests that there are many activities which are not "instrumental" from which satisfactions may be derived. He labels these "microflow activities" into six divisions: imagining, attending, oral, kinesthetic, creative, and social (p. 147). He notes:

> There are periods of time in everyone's life, in everyone's day, when neither visceral nor social pressures are forcing us to pay attention or to act with total involvement. During these periods

> we are "free" but we can also be anxious or bored--anxious because there seems to be so much that could be done, bored because there is nothing one can do. It is then that flow comes into play. Flow activities are arbitrary activities that people use to give shape to their experience.
>
> Flow is potentially, the most fulfilling kind of experience because it is free of phylogenetic and historical constraints and hence allows people to experiment with new actions and new challenges. Deep-flow activities like chess, climbing, composing, surgery, and religious rituals provide structure to perception and action for long periods of time. Such activities produce vivid experiences which can transform and give meaning to a person's whole life (p. 158)

It is just these micro-flow activities which are contained in the teaching experience (though they are as yet unexamined) and which could enable that activity to become far more fulfilling and rewarding than it now is. It is interesting also that satisfactions such as these are quite different from Dewey's conception of "wholeness" which is characteristic of having "an experience." Dewey (1922) does say, however,

> In a genuine sense every act is already possessed of infinite import. The little part of the scheme of affairs which is modifiable by our efforts is continuous with the rest of the world... when a sense of the infinite reach of an act physically occurring in a small point of space and occupying a petty instant of time comes home to us, the meaning of the present act is seen to be vast, immeasurable, unthinkable.

We have expatiated on the theme of "feelings" here to illustrate a realm of human experience which is little recognized in discussions of teaching improvement. Feeling accentuation might well be incorporated into faculty development programs with positive benefits likely. So also could self-reward for feeling recognition.

A Brief Recapitulation

Summarizing to this point--in the first section above, we discussed alternative ways of conceiving of motivation. We looked at four theories--need/drive, goal/incentive, behaviorist, and feeling/flow. We attempted to show that each theory had some useful insights into the understanding of how

better to motivate faculty to commit themselves to teaching. The bias of the paper is to look at "feelings" and emotions simultaneously as satisfiers of needs, as products of goal achievement and hence as incentives to sustained activity, and as reinforcements for desired stimulus-response associations. We turn now to a more specific consideration of the manner by which faculty find satisfactions in different settings. In particular, we look at cues and arousal and at feedback channels.

Cueing and Arousal

We have considered thus far the notion that at least three avenues of stimulation have the potential for inducing states of satisfaction or pleasure in faculty through their teaching efforts: extrinsic rewards (those seen as resultants of performance); intrinsic rewards (the pleasure of observing the intended effects of one's labor); and autotelic rewards (the feelings one receives while performing the activity, quite apart from whether the activity is successful in achieving objectives). To make it possible for faculty to experience these satisfactions (and, as the argument goes to become more motivated and committed to teaching), it is necessary to understand the nature of the cues in the teaching environment. Assaying the available cues may permit a better structuring of them and of faculty sensitivity so that they become more available as a source of feedback and motivation.

There are a number of factors which influence the impact that cues may have on behavior. These include ~~are~~ availability and salience, cue clarity, cue reception, and cue interpretation (from a cognitive perspective) or use (from a behaviorist stance).

First, human interaction systems can vary widely in the degree to which cues can be and are "evoked." That is, the units in the system can be energized to varying degrees to provide cues which may be recognized by some other sensor and, in addition, they can be energized to provide more concrete feedback. Hence, the system is dependent in part at least on the degree to which respondents (e.g., students and faculty) are stimulated or provoked into cueing behavior. Such predispositions can be encouraged through concrete instruction and/or support of classroom norms. In addition, faculty may use surprise to generate a kind of response in his/her students which can be recognized as meaningful in some way. From an "interactionist" perspective both faculty and students can be seen as operating at high or low levels of mutual attentiveness, each prepared to stimulate one another for the purpose of changed behavior or satisfaction (cf. Berlo, 1960, p. 111). Note that we are not here referring to the capacity of the individuals in the system to receive or to make use of the signals--only to the degree of potential are energy which is regularly transmitted. The amount is conditioned by formal requirement, institutional and group norms, faculty and student preference, and habit.

The mode and character of the transmission of cues is the second element in cueing theory. Clearly, different kinds of feedback may be appropriate at different stages in the semester or under different circumstances. In the teaching setting, for example, one-on-one feedback may be more appropriate for the transmission of certain kinds of information. Standardized student evaluation may be another. On the other hand, "unobtrusive measures" (e.g., student doodles left behind) may be cues reflecting important student attributes which cannot be obtained in other ways. The connection of grading to evaluation, for instance, may compromise the integrity of the cue transmission (viz. the extensive research on the efects of grades on evaluation).

Another variation in the transmission variable is the c of the information. According to Cummings, O'Connell and Hu satisfaction will be higher when information specificity is that "perceived irrelevancy of low specificity information c dissatisfaction than feelings of uncertainty caused by high ation." In general, affective tone is improved by the provi information. Cummings et al. also found that loosely struct be relatively more satisfied under low information load cond structured groups will be more satisfied under high load cor

The implications here with respect to an individual fac than a group) are that for classes and courses which are pla structured enterprises, feedback to the instructor which is specific may not be appropriate and "will generate a feelinc perhaps, helplessness." Given the absence of research in th appear that the general domain of information transmission n much more clearly, perhaps using more sophisticated informat terminology (e.g., entropy, noise, coupling, channel capacit Bess, 1967). The question of cue transmission is also infor of the effects of knowledge of performance or knowledge of r 1956; Erez, 1977; Becker, 1978). The research in this doma: that knowledge of results incontrovertibly facilitates perfc the effects of such knowledge on motivation are moderated by goals--goal clarity, goal difficulty, and availability of re words of Becker (1978),

> Some have argued that the motivational effect attributed to feedback is actually due to goal setting ... according to this view feedback will have a facilitating motivational effect only when it leads to the setting of a difficult performance goal. This implies that the presence of motivational feedback is not a sufficient condition for improved performance, but does this mean that it is also not a necessary condition? Since there are other ways in which people may be encouraged to set difficult goals, could motivational feedback be eliminated with no adverse effects on performance if another effective inducement to goal setting is provided in its place?

The amount of energy and the salience of cues and the character of the cue transmission are two elements in the discussion of cue utilization. The third is cue reception. Clearly, for different persons, cues in the environment will have more or less salience, depending on a number of personality and other psychological variables. Anxiety will obviously lead to skewed perceptions. For example, a student may have a desire not to be "stimulated" all the time, but a faculty member, anxious in a classroom setting, may never be sent the cue, may never perceive it if sent, or may misinterpret it entirely. As Jersild (1955) notes:

> In the typical instance of fear (as usually defined) we perceive what it is we are afraid of. In anxiety the perception is not so clear, and it may be utterly unclear and confused. An anxious person says, I feel low, guilty, depressed, uneasy, etc., but I don't know why. The perception of what it is that excited the emotion is fuzzy. There is no clear condition or object or circumstance to which he can attribute his uneasiness.
>
> What he perceives as the thing arousing his emotion is not really the "exciting event"--instead it is, so to speak, the trigger (p. 43).

Recall also the distinction made above between psycho-pathological satisfaction (satisfactions of personality deficiencies/neuroses) and real satisfactions (of both hygienic and growth needs). Note, furthermore, that not all anxiety is dysfunctional or unhealthy. The point here is only that emotional states bias one's perception of the environment.

Perhaps a better approach to understanding the openness which a teacher must have in a classroom to perceive cues accurately comes from the Combs (1962) conception of the "adequate personality." The capacity to confront life openly and without undue defensiveness has sometimes been called "acceptance." A person who is accepting is ready to and capable of admitting evidence into awareness. Effective action requires as a first step the admission of evidence into consciousness. Indeed, threatened people narrow their perceptions of the threatening events and retreat to the defense of their existing perceptual organization. Such behavior reduces the capacity of the typical person (faculty member) to perceive useful cues in the environment which might tell him/her that the behavior is both functional and satisfying. As Langford (1975) notes, "What is sought is a skill, a sensitive taste, a refined ear, a perceptive eye, a discerning mind, all of which are rooted in tacit comprehension; and these are gained through practice and most often through guided practice." Langford goes on to suggest that these capacities in certain persons enable them to "accept the vast number of cues that constantly impinge upon them and to tacitly evaluate and utilize these cues in skillful activity and understanding."

It is clear, of course, that while faculty development efforts may help to open many faculty to the cues which could both improve their teaching and satisfactions, not all faculty can benefit from such counseling. Indeed, there may be some personality profiles which are unsuitable to the teaching profession. In some more sophisticated system, such persons may be effectively screened out through the recruiting process. While it is beyond the scope of this paper to suggest the personality variables which might best allow prediction of which kinds of faculty would be most open to accurate perception

of cues from students, one clear direction for inquiry is suggested by the work of Witkin and Goodenough (1977) on the subject of field independence and field dependence. Persons whose characteristics are at either end of this continuum tend to invest their psyches in different psychological domains and to differentiate their environments in quite different ways. Field dependent people are likely to be more interpersonally oriented, while field independent people have a tendency to be more impersonal.

As Witkin and Goodenough note, "field dependent people more than field independent people, pay selective attention to social cues, they favor interpersonal over solitary situations; they seek physical closeness to whose with whom they interact; they more readily disclose their feelings and thoughts to others, an approach likely to stimulate reciprocity in others. The pattern for field independent people reveals quite different traits, orientations and dispositions" (p. 22). Interestingly in another publication (Witkin, Goodenough and Oltman, 1977) researchers reported revealing that the nature of the defenses used by these two types of people is quite diffferent. For example, field independent "are prone to use isolation, intellectualization, and projection as characteristic defenses, whereas field dependent people are more likely to use repression and denial" (p. 16). Obviously such dramatic differences in styles of differentiation, adaptation to stress, and orientation to cues suggest quite different ways of structuring feedback which is beneficial in terms of satisfaction and productivity.*

*Also see Fiedler, et al. 1976, and Mitroff & Kilmann, 1978, for alternative approaches to diagnostic methods for revealing different patterns of faculty cue receptivity.

It is interesting also that the behavior change brought about by cueing requires that the faculty member initially listen or attend without judging. He or she must, in other words, move down the Bloom et al. (1956) and Krathwohl et al. (1964) scales, or down the Perry (1970) continuum, or down the Kohlberg (1969) hierarchy. Initially, attention to classroom cues requires non-judgmental, non-differentiating openness. The highly intellectual/cognitive orientations of most faculty, however, create dispositions to be at the higher ends of these scales, disposing them to be pre-selective in discriminating cues and evaluative in determining their appropriateness to satisfaction and teacher improvement (Yerkes & Dodson, 1908; Easterbrook, 1959). In fact, as Lewin (1975) and Nadler (1977) report, in order for change and learning to take place the cues must disconfirm expectations and should not reinforce habitual patterns. Clearly letting in such cues can be threatening. In Katz's (1962) words:

> Cues are likely to be filtered through the teacher's anxiety, vanity, obtuseness, or optimism, and hence often tend to be confirming of the original attitude. Teachers walking toward their classes frequently can be heard to say that they are unprepared, often after hours of preparation.

Clearly finding that one's favorite view of self is not similarly perceived by one's students makes one quite vulnerable. Indeed, faculty frequently seek not disconfirming cues but only those cues which reinforce their self-concept, creating realities of social life (Simon, 1970; Berger and Luckman, 1967). Schramm (1955) observes that the receiver of information takes the course of least resistance among alternative communications available to him (though his reference is largely to physical rather than psychological effort). Fear of

failure blocks out potentially informing cues and may blocks out motivation to seek feedback. However, blinders to cues do have a psychological function, providing insurance against frustration and disappointment. The problem, then, is that some cues which might change behavior and others which might provide satisfaction are screened out. The typical sophisticated faculty disposition precludes an accurate reception of both disconfirming and satisfying cues.

In the light of this very abbreviated discussion of cueing, we must now ask the question of its relevance to motivational theory and to situations as considered earlier. The matrix below describes these potential relationships:

Exhibit IV

Relations of Cues and Motivation

Cue Dimensions	Motivation Theory: Need Theory	Expectancy Theory	Behaviorism	Flow Theory
Cue Salience				
Cue Content and Quality				
Cue Reception				

The theories of motivation differ in a number of respects with repect to the relevance of cues. Need and expectancy theories, being more cognitive than the other two, require that cues be evoked and delivered in forms suitable to conscious appraisal (cf. Vroom, 1964). Different needs, for example, demand different kinds of cues as indicators that needs are being met. Expectancy theory would require cues which address the variables in the motivation equation--namely, probability of expected achievement, valence of the activity and valence of the outcomes. Cues for behaviorist theory would have to recognize precisely the contingencies

of reinforcement which are needed to encourage faculty behaviors of a desired nature. Flow theory, finally, would capitalize on the latent aspects of the teaching/learning situation, demonstrating through cues to the faculty member sources of satisfaction not normally anticipated. While all the theories would require about the same amount of cue salience, the requirement for faculty reception of cues would doubtless be highest for expectancy theory and least for behavior modification.

Cueing theory also is related to the question of intrinsic and extrinsic motivation. Cues which reward appropriate behaviors with external tokens (e.g., pay, promotions, office rugs) may tend to reinforce that behavior, according to behavior modification theorists, but they may also diminish the intrinsic motivation and satisfaction associated with performance of the work itself. As Rachlin (1978) notes, the critical "test for a reinforcer must be whether it can support behavior. If we take away external reinforcers, leaving only self-reinforcement that supports no behavior other than that involved in its consumption, then self-reinforcement loses its effectiveness." The presumption here, of course, is that the work itself in the short run may evoke negative feelings in the actor, even though in the long run, the satisfaction of completion is profound. As we have maintained throughout this paper, however, such arguments ignore the potential effects of training on the improvement of satisfactions from flow activities.

Feedback

But let us assume for the moment that the cues do penetrate the faculty consciousness in relatively unadulterated form. The question then is of what use they are--in what directions they might incline the faculty member to change his or her behavior and/or to appreciate the satisfactions which are

being derived from the activity. To understand this question, it is necessary to deal more extensively with the question of "feedback"--its dimensions and meanings.

From an organizational perspective Nadler (1977) suggests the following points as a means of understanding the concept of feedback:

1. Feedback is a basic component of self-regulating systems
2. In its most precise form feedback is information about the output of a system which controls the system input or transformation processes
3. In its broader forms feedback is any information about the system functioning which has the potential for being used to change the operation of the system
4. Viewing organizations as open systems, feedback is the necessary component, enabling the correction of errors, the adaptation to environmental change, and learning
5. Since in social systems such as work organizations feedback does not automatically create change in the system operation, the process of obtaining, interpreting, and using feedback information is important.
6. Since organizations often ignore feedback or do not make an effort to use feedback effectively, organization development activities serve an important function of facilitating feedback processes, thus helping organizations to correct errors, adapt, learn and grow (p. 70).

Nadler goes on to suggest that feedback serves two functions: a "motivating" function and a "directing" function. That is, feedback can stimulate organisms to be more energetic, and it can direct those organisms in more meaningful directions. Nadler points out that for each of these functions there are a number of mechanisms which operate to affect the function. With respect to the "motivating" function, Nadler adopts an expectancy approach. Feedback affects group and individual performance through "disconfirmation," through "internal reward expectancies" (e.g., setting up expectancies that the feedback will yield positive feelings), and through "external-reward expectancies" (e.g., the expectation that behavior will lead to the attainment of other rewards from the environment). The "directing" function of feedback

is accomplished through "cueing" (calling attention to errors) and through "learning" (where feedback addresses errors which cannot be corrected without further inquiry--cf. Annett, 1969). Nadler suggests that these mechanisms will not work unless certain necessary conditions are present. These are indicated in Exhibit V below.

Exhibit V

Ideal Conditions for Effective Feedback*

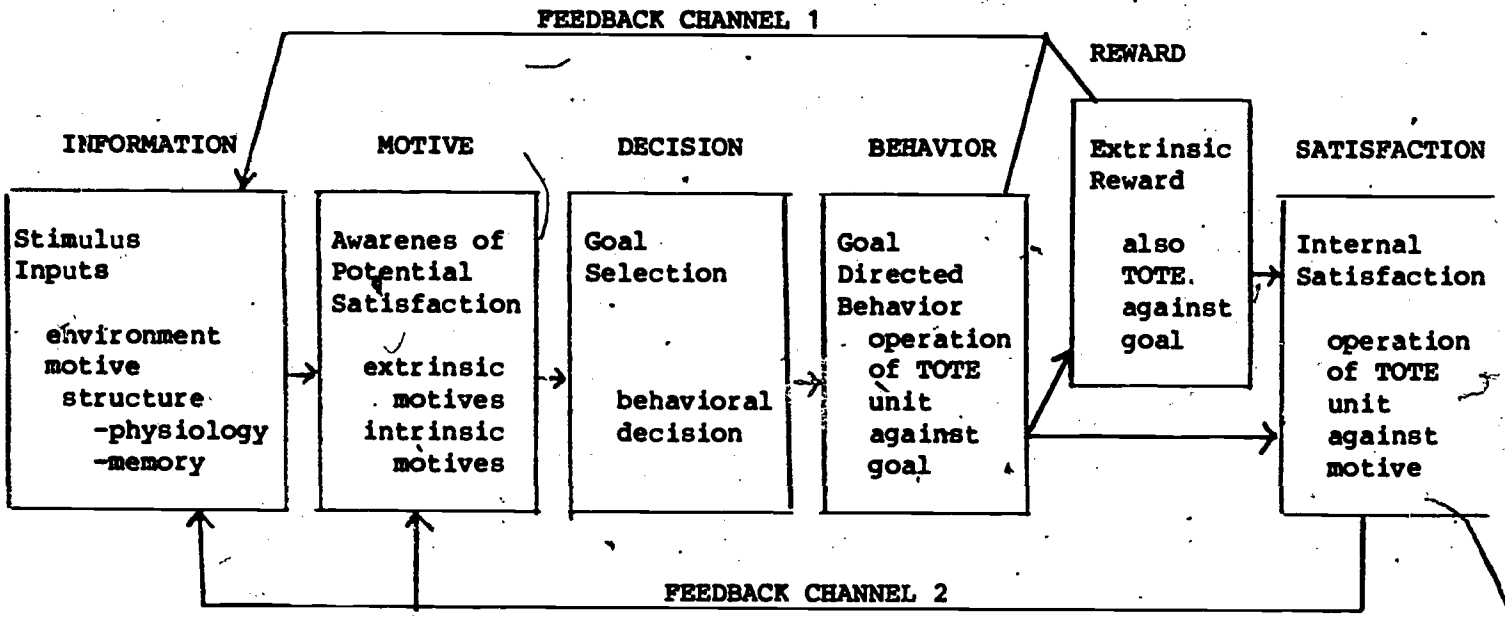
1. Should provide information about process problems as well as task-performance measures
2. Should include some models of desired behavior so that the individual or group will have some idea of the ultimate goal of the correction activities
3. Performer must have some way of beginning search routines and testing and/or evaluating alternative solutions

While these conditions are ostensibly valid, it is necessary to inquire more fully and somewhat more abstractly into the reasons they may affect motivational structure. Research on feedback borrows from the literature on cybernetics, particularly from the seminal work of Miller, Galanter and Pribram (1960). These authors proposed that behavior is governed by a feedback loop which they label a "TOTE" unit. For Miller et al., TOTE (Test, Operate, Test, Exit) describes the sequence of cognitive processes and behavior in which people engage. Deci and Porac (1978) have amplified this feedback model somewhat by suggesting that there are, in fact, two feedback channels. Both channels provide information to the person's motivational structure. One channel gives data both about productivity and about extrinsic rewards available or received from the

*From Nadler, 1977, p. 78. Cf. Thorndike (McKeachie 1976); Brooks and Emmert (1976, p. 158).

Exhibit VI

A Schematic Representation of a Cognitive/Affective Framework for the Study of Human Motivation*



behavior. The other feeds internal satisfactions back. Note that satisfaction is a product of both rewards for achievement and the achievement itself. In contrast to the Lawler model noted earlier, this scheme suggests that satisfaction is important to motivation--but only when it becomes part of a stimulus input through feedback. Thus, for Deci and Porac, there are two quite distinct kinds of feedback which help determine both the intensity and direction of behavior.

Note that the model is intentionally cognitive in nature. Hence, it tends to ignore the two other motivational schemes outlined earlier. For example, Deci & Porac suggest that "task-contingent" rewards (reinforcements which depend on the achievement of certain levels of performance) have been shown to under-

*From Deci and Porac, 1978.

mine intrinsic motivation. The extrinsic rewards in their model are coupled with performance cues to form feedback channel number one, which, importantly, gives "information" to the actor as a stimulus to further behavior. They do not directly affect "motive structure," which is an anticipation of a potential future internal satisfaction. The implications for faculty development are that cues for faculty about their performance must be carefully framed so as to utilize both feedback channels.

Perhaps a major drawback to the Deci & Porac model is that their concept of internal satisfaction is predicated on only two kinds of feelings: competence and self-determination. In point of fact, other "needs" (not necessarily cognitively based) can be met through work activity and can form the stimulus for motivation. Moreover, the Deci & Porac model seems to ignore the informational aspects of satisfaction. That is, feelings can be viewed not only as internal states, but--through training--as recognizable (i.e., cognitively apprehended) data of value to the actor. As such, they can also provide motivational stimuli to behavior. Thus, a third channel of feedback would appear to be necessary, which links internal satisfaction itself directly to the stimulus/inputs block, not as feeling states but as cognitions of feeling states.

Feedback Design

We turn now to the practical implications for improving teaching of the above discussions, using the modified Deci and Porac framework. Each of the three channels must be carefully structured to carry the proper information propitiously. We discuss first the loop between goal directed behavior and motive structure as stimulus (channel 1).

One of the most productive possibilities for improving the efficiency of feedback is to find better modes of "evoking" useful cues in the classroom or

other teaching environment. While cues are being sent to the faculty member continually, in order to make certain that they are received and at the right time and in the right form, various new techniques need to be employed. For example, "surprise" is a common teaching device, used primarily to stimulate students to greater learning. Seldom is it used to evoke feedback which faculty can use either consciously or unconsciously.* The changing of classroom format or requirements or the introducing of new, unexpected materials or persons can be done in accompaniment with a careful plan to observe student reactions. Indeed, student reactions can be encouraged prior to and during the surprise element. From a goal oriented perspective, a faculty member looks at cues evoked by the surprise element to learn about the students' achievements (as those are intended by the instructor). In terms of faculty satisfaction, on the other hand, surprise methods can be employed solely for the purpose of giving the faculty member pleasure.

From ways of evoking cues, we turn to the issue of making feedback useful to improved performance--making disconfirmation possible.** Centra (1977) suggests that information or feedback must be able to "produce in the teacher some dissonance or dissatisfaction. It helps to open him or her to change..." What kinds and forms of data from students might do that?

There has been some small amount of literature addressed to the question of the timing and type of formative evaluation which is most beneficial to instructors. Pambookien (1974) reports that the faculty who are most receptive to feedback are in the middle third of rated effectiveness. Those who are in

---

*See the discussion of "arousal jag" in DeCharms (1968, p 39).

**In the model, feeding back constructively to the memory part of the motive structure.

the top third apparently feel that they do not need information about their teaching, while the bottom third become so depressed with their ratings that they are unable to use them. The consensus (Pambookien, 1976) is that "instructors who received feedback did not significantly improve their teaching when compared to those who had no access to such information." (This obviously is countered by the 1974 data.) In his 1976 study, Pambookien was concerned with what happens to teaching when instructors who have favorable concepts of their teaching effectiveness are presented with data from students disconfirming that concept, or conversely, the effects of receiving positive feedback on instructors who have unfavorable self concepts. His data confirm the notion that the greater the discrepancy (when that difference is identified early in the semester), the greater the improvement after feedback. The feedback seemed, morecver, to be most helpful to the instuctors whose perceptions of their teaching effectiveness was minimally discrepant--i.e., to those who had an accurate perception of their teaching skills. Pambookien's informative discussion of his findings includes considerations of the effect of positive feedback on instructors whose self concept is low. He suggests that these faculty may be unable to accept a change in image and tend to distort or ignore the feedback in order to maintain their negative self image. Pambookien's finding that in the case of unfavorable discrepancies of instructors (instructor rating better than students'), faculty "changed more on skill, feedback, rapport, general teaching ability, and the overall value of the course" supports the notion that some kinds of feedback may be of value to certain kinds of instructors (cf.Skilling, 1969, pp 51 ff; Trent and Cohen, 1973;Miller, 1971; Centra, 1973 ; Nemeroff & Cosentino, 1979; Rotem & Glassman, 1979).

In addition to designing a feedback system which can be accommodated into the instructor's self concept, other ways of making student ratings useful

can be devised. Gage (1978) suggests that student ratings are useful as feedback under three conditions: when students are mature; when teachers are motivated to change because they respect student opinion; and when initial ratings are moderate rather than very high or low. Commenting on McKeachie's use of achievement motivation theory, Gage notes that greater success in teacher improvement can be anticipated when goals are neither unrealistically high nor too discouragingly low. But, it is naive to conceive of students in the classroom as a monolith. As Mann et al. (1970) imaginatively found, there are clusters of students with wide variations in disposition in every class, making it virtually impossible simultaneously (or ever) to be maximally effective with respect to each--there being conflicting needs and expectations. The clusters of students Mann et al. identified were the compliant, the anxious dependent, the discouraged, the independent, the heroes, the snipers, the attention seekers, the silent students.

But it is not impossible to make some headway in being effective with respect to these constituent groups. What is necessary is to understand that the process of feedback to faculty might be quite different for each of them. A silent student may be quite reluctant to provide any kind of feedback, a sniper may provide disengenuous or useless feedback, the discouraged may have other needs, and their feedback will be still different. It might be possible, however, to "train" each of these groups. Obviously, they must first be identified, and this itself is a kind of feedback device. Instructors must understand the existence and strength of the various clusters of students in classes in order better to design their courses and pedagogy. As a first step not only in pedagogical change but in designing a feedback system, these clusters must be revealed. Then, selected members

of each cluster can be identified to provide a special kind of feedb consistent with the students' capacities and special needs.

It is fairly certain that faculty as they now are trained, cann selves engage in the training of students to give feedback. The "ar giving and receiving help requires a professional who can guide stud this very difficult procedure. As Miller (1975) notes, "most of us give advice. Doing so suggests that we are competent and important. caught up in a 'telling' role easily enough without testing whether advice is appropriate to the total issue or to the abilities, the fe the powers of the person we are trying to help." Combine this procl with the natural fears of students that their advice will be misunde and one can easily see the complications of designing an effective f system. Thus the necessity for an external training agent becomes e important. Indeed, one could imagine feedback initially proceeding a professional intermediary rather than directly from the students t faculty member.

We turn now to an exploration of some ways in which feedback lo (cognized feelings) can be improved. Here the concern is not direct bettering teaching performance, but with heightening faculty feeling pleasure associated with teaching. (The examples which follow may a mundane. Since little or no experimentation has been reported, and "concepts are still without percepts", as William James would say.) should be recalled that feeling accentuation is the end here. For instance, faculty can arrive early for class and make themselves ava for "small talk." Such informal interactions can be found to be enj

*They can also be useful, of course, in providing feedback to the fa member about classroom performance, where that feedback may provide better information about effectiveness (leading in turn to differen of satisfaction). But the objective here is not directly to improv effectiveness.

conceivably ignore data about his or her teaching effectiveness in favor of data which simply provide good feelings about teaching as a whole.

Other devices along these same lines might be videotaping, not for the purpose of improving teaching but to demonstrate faculty satisfaction. Viewing themselves on videotape as "enjoying" the teaching process may have a positive reinforcing effect on faculty in that the classroom dynamics become less fearsome. They see themselves as relaxed and "feeling good" (Gaylin, 1979) and they come to the next such experience with less anxiety. (It should be noted, of course, that each self-confrontation must be individually managed lest the clash of self-concept as a teacher and the newly perceived reality via the tapes be threatening - cf. Fuller & Manning, 1973).

Other special feedback devices can be designed. Periodically faculty might administer special questionnaires which are intended to gather data--not about the students' learning, nor even about faculty effectiveness. Rather these surveys would feed back to the faculty member information on student satisfaction, informal student norms, and other evidences of student behaviors which confirm the faculty member's notion that he/she may be making some difference in the students' lives.

Another seldom used device is the suggestion box. Anonymous feedback from students is the most helpful in that it is not structured by the faculty member. Nevertheless the faculty member must encourage the provision of feedback, or students will not provide it.

Groups or teams of students often provide the security of numbers, enabling students to be more direct and honest in their feedback. The faculty member can participate directly in the team or group feedback, or students can jointly decide how to provide the information to the faculty member. Such discussions among students have spinoff benefits in terms of student introspection about their own learning objectives. Along these same lines, colleague feedback has been shown to be effective, particularly when the mentor is known to be

knowledgeable about teaching and is liked and respected by the recipient of the feedback. (Cf., Hanser & Mirchinsky, 1978.)

Since such expertise is rare, other faculty must be trained both as observers of teaching and givers of feedback. Once again, it must be reiterated that faculty must be trained in how to receive and use feedback. Merely having the information is not sufficient. The faculty must learn how to integrate that information into their feeling systems (and into their teaching objectives). Such training is not now usually given (though see the Sperry Rand program on teaching listening skills -- Sperry, 1980). The concentration seems instead to be on improvement of skills, ignoring the self-directed potential of training faculty to interpret these data more meaningfully.

Self-Reward

Some effort in this direction, however, has been attempted through the use of faculty self report devices. Asking faculty to fill out questionnaires about their objectives and to evaluate their own teaching at least indirectly addresses their needs to be more sophisticated in their use of feedback cues (cf. Centra, 1977; Miller, 1979). New techniques in this area come at least in part from the social science literature (Bandura, 1971; Rachlin, 1978; Thoresen & Mahoney, 1974).

The research efforts reported on the subject of "self-control" borrow heavily from behavior modification theory. Simply stated, it suggests that many persons know what they "ought" to do, but are not able to do it. As defined by Goldfried and Merbaum (1973), self control

> ... can be viewed as a process through which an individual becomes the principal agent in guiding, directing, and regulating those features of his own behavior that might eventually lead to desired positive consequences. Typically, the emphasis in self-control is placed on those variables "beneath the skin" which determine the motivation for change.

The time frame is central to the understanding of self-control, since actors

without it are unable to sacrifice short-term rewards for long-term ones. As Rachlin (1978) notes, "subjects show self-control when they prefer larger rewards in the future to smaller rewards in the present or, symmetrically, when they avoid greater pain in the future in return for less pain in the present." To gain more control over what one knows to be the better alternative, the theory suggests a procedure of "self-reinforcement." Using desirable reward contingencies, a person can gradually bring his behavior under control. For example, he can consciously agree to give himself a number of rewards linked specifically to the performance of certain undesirable tasks. In time, if the tasks are themselves intrinsically rewarding, the secondary reinforcements will not be necessary. "Intuitive" rather than "rule" control takes over (Malott, Tilleman & Glen, 1978, p. 123 ff.).

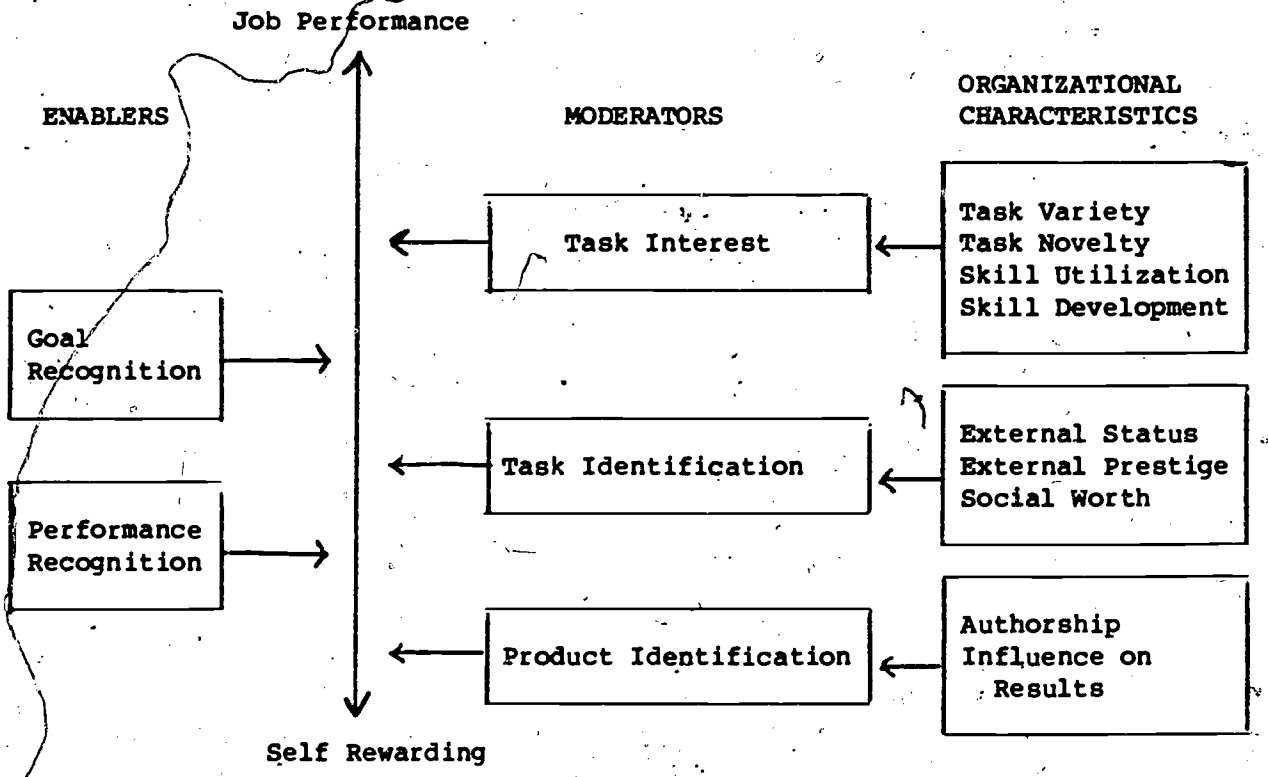
The effectiveness of self-control depends, of course, on accurate "self-observation" (Thoresen & Mahoney, 1974, p. 41). The science of accurate data recording has become quite sophisticated, and many techniques have applications in the classroom. It appears that the act of recording instances of positive self-reward has itself a behavior modification function. For example, it could be argued that a faculty member instructed to reinforce desired teaching behavior in the classroom will improve his performance not only because of new knowledge of the "correct" behavior, nor even because correct behavior will be reinforced, but because the act of recording instances of reinforcement is itself a positive reinforcer.

From the perspective of need-theory or expectancy theory, on the other hand, self-rewarding has been called "the private, cognitive, affective consequence of job behavior" (Blood, 1978). It is also "the evaluative, cognitive response an individual makes to his/her own job performance. To self-reward one tells

oneself how well (or poorly) the job has been done. This is an affective reaction to one's own performance." Self-reward can take place in response to any special feature of the job--to social interaction, to productivity, to qualitative aspects. Importantly, Blood sees the relationship between personal satisfaction and job performance as bi-directional (See Exhibit VI below).

Exhibit VI

Organizational Influences on the Relationship Between Job Performance and Self Rewarding*



It is interesting that the ability or capacity of an individual to reward himself or herself for a good job is contingent on the recognition of personal

*From Blood (1978).

goals* and the perception of cues as to the achievement of those goals. These "enablers" are "perceptions of two aspects of the work situation." We are, of course, interested ultimately in improved teaching performance (as well as faculty satisfaction), and this model seems to address the conditions by which both are maximized.

As noted in the exhibit, in addition to the enablers, there are three moderators which impact the relationship between job performance and self-reward. We assume that by the affective consequence of behavior--or self-reward--Blood means personal satisfaction, though he is unclear on this point. An example of the act of positive self-rewarding is "pride"; of negative self-rewarding, "shame"--both related to "satisfaction" but not quite the same. It is of interest to note that Blood does not pose a causal relationship between satisfaction and productivity, as the research literature seems to do. For Blood the same moderators effect both performance and satisfaction (self rewarding). These moderators include task interest:

> If the worker is interested in the work, good performance should lead to high self rewarding and poor performance should lead to low or negative self rewarding. On the other hand, if the worker is uninterested in the task, the performance level will be unlikely to lead to self rewarding, i.e., knowing that s/he has performed especially well (or poorly) on the task in which s/he is not interested should not cause personal pride (or shame).

More particularly, a faculty member who is not interested in teaching will not look to his or her performance as a basis for self reward.

To some extent Blood's model does not hold for faculty (especially in

---

*While Blood sees goal recognition as the degree to which an individual can apprehend the organization's goal accurately, for the purposes of this paper we see the organization's goal as identical with the faculty member's pedagogical goals. We assume that those personal pedagogical goals are coincident with the objectives of good teaching as viewed by the institution as a whole.

universities) because of the multiple roles they have and the reward structure which often pulls them away from their teaching responsibilities. The organizational characteristics which Blood proposes as affecting the moderators are task variety, task novelty, skill utilization and skill development, all present in the teaching role but not sufficient to explain the significant amount of variance in task interest among faculty. As noted above, it is the thesis of this paper that task interest itself is a product of satisfactions derived on the one hand from good performance, performance recognition, and the salience of the connection between these two important needs, and on the other from the rewards of less intentional "flow" activities.

Blood's second moderator, task identification, is the "extent to which the worker's self interest is defined by the fact that s/he is a doer of that task." Here again, to the degree that teachers do not perceive themselves as predominantly teachers, but as researchers with part-time teaching responsibilities, their task identification will be low and the effects of job performance on self reward and of self reward on job performance will be weakened. The key again, as noted earlier, is in the enabler of "performance recognition," which is another way of addressing the feedback question as a whole.

"Product identification," the third moderator, is the degree to which a person may see him/herself as a contributor to the product as a whole as opposed to merely a task performer. A faculty member who sees the role as "educational" as opposed to merely "knowledge transmission," is likely to have greater "product identification."* Indeed, the ambiguity of the impact of

---

*This is the classic dichotomy between "teaching a subject" vs "teaching a person," the former lacking the personal, developmental orientation which conceives of the student as more than an "empty vessel" to be filled by an erudite faculty member.

faculty on student growth and development as the faculty-student relationship is now organized prevents faculty from identifying strongly with the "product" or person. Finally, as Blood notes:

> One of the most intriguing aspects of the model is the possibility of increasing our understanding of the relationship between job performance and job satisfaction. Since self rewarding is an affective response to the job, it can be considered one aspect of the multi-faceted area of job satisfaction. It can be thought of as satisfaction with one's own performance. The model specifies that a positive relationship can exist when the enablers are present and the relationship will be strengthened by the moderators. When the moderators and/or the enablers are low, no relationship would be expected.

Perhaps the most serious limitation to the Blood model is its reliance on cognition among the enablers (cf. Guzzo, 1979). Again, as Csikszentmihalyi (1978) suggests, this bias comes out of a long tradition begun with Hull, Freud, McClelland, Tolman, Murray and others who say that performance is related to some external state. Activity is seen to be motivated by the perspective of achievement of a future goal state. Csikszentmihalyi suggests that this model pictures persons as having an internalized notion of these desirable futures. However, he notes, "research on intrinsic motivation...suggests a somewhat different model. It reveals that a considerable proportion of behavior cannot be explained in terms of anticipated goals or rewards but rather in terms of goals and rewards that arise out of direct involvement with an ongoing activity." Further,

> a large part of everyday behavior is directed toward goals that are not visualized as goals before the individual has completed his or her involvement with the task. Such behavior is not followed by any of the fixed rewards derived from a "closed" system, nor does it make much sense to claim that it is the association with previous rewards that sustains the behavior.

What Csikszentmihalyi is suggesting, in other words, is that in many cases people act because experiencing the stimulus alone is rewarding in and of itself, not because responding to it may lead to the achievement of a future

goal with perhaps yet another set of rewards. This is not to say, of course, that such attention to immediate cues is without problems. As True (1979) notes, this intuitive way of teaching, this present or now orientation, leads to conflicts, as one is constrained to address "phantom" cues during times when one is not necessarily in contact with students. That is, one carries around the cues in one's mind and may be forced to attend to them at unplanned moments.

The Feedback System Institutionalized

The last topic noted here briefly, has to do with the formalization of the feedback system and with the establishment of supporting informal norms. Not only must instructors receive more feedback to maximize their satisfactions as well as their productivity, but the students and faculty who provide the feedback must also have feedback of their own. Just as motivation to produce feedback is enhanced by the appropriate kind of feedback, so the motivation to produce feedback is itself improved by the proper kind of reinforcement. There are many ways in which this can be done. Perhaps the most important is the recurrent statements by faculty of the value of feedback. Students and colleagues who see that feedback is appreciated will be more likely to continue to provide it, and the communication process and channels will be institutionalized.

Conclusion

The question of maximizing intrinsic rewards seems to be based on the acquisition of skills--the skills for providing feedback and for accepting and using it efficiently. In attempting to understand how this process may occur in higher education, we have attempted to show the various relationships among productivity, satisfaction and feedback as well as the conditions which may

bear on those variables. It is the contention of this paper that faculty at present are unmotivated to improve their teaching largely because they are (1) not aware of the potential rewards of teaching, and (2) not able to apprehend the cues both in themselves and their environments which would activate those more intrinsic rewards. By careful training of both faculty and students, it is possible that satisfactions can be improved significantly. In the long run, of course, students must benefit. When faculty are alive and committed to the teaching profession, student growth and development cannot help but be heightened.

References

Alderfer, Clayton P. Existence, Relatedness, and Growth: Human Needs in Organizational Settings. New York: The Free Press, 1972.

Ammons, R.B. "Effects of Knowledge of Performance: A Survey and Tentative Theoretical Formulation," The Journal of General Psychology, April, 1956, Volume 54, second half.

Annett, John. Feedback and Human Behavior. Baltimore: Penguin Books, 1969.

Argyris, Chris. Increasing Leadership Effectiveness. New York: John Wiley and Sons, 1976.

Argyris, Chris, Integrating the Individual and the Organization. New York: John Wiley & Sons, 1964.

Bandura, Albert. "Vicarious and Self-Reinforcement Processes." In Robert Glaser (Ed.), The Nature of Reinforcement, New York: Academic Press, 1971.

Becker, Lawrence J. "Joint Effect of Feedback and Goal-Setting on Performance: A Field Study of Residential Energy Conservation," Journal of Applied Psychology, April, 1978, 63,4.

Berger, P.L. and Luckman, T. The Social Construction of Reality. New York: Anchor Books, 1967.

Bergquist, William N. & Steven R. Phillips. A Handbook for Faculty Development. Washington, D.C.: Council for the Advancement of Small Colleges, 1975.

Berlo, David K. The Process of Communication, New York: Holt, Rinehart & Winston, 1960.

Bess, James L. "The Motivation to Teach," Journal of Higher Education, May/June, 1977, 48, No. 1.

Bess, James L. "Classroom and Management Decisions Using Student Data," Journal of Higher Education, May/June, 1979, 50, No. 1.

Bess, James L. "Integrating Student and Faculty Life Cycles," Review of Educational Research, Fall, 1973, 43, 4.

Bess, James L. University Organization: A Matrix Analysis of the Academic Profession, New York, Human Science Press, 1981 (in press).

Bess, James L. "The Medium and the Educational Message, A 'McLuhanistic' Look at Philosophy and Practice in Higher Education, 1825-1835 and 1875-1885," Unpublished manuscript, 1967.

Biglan, Anthony. "The Characteristics of Subject Matter in Different Academic Areas," Journal of Applied Psychology, 1973, 57.

Blau, Peter M. Exchange and Power in Social Life, New York, John Wiley & Sons, 1964.

Blood, Milton R. "Organizational Control of Performance Through Self-Rewarding," in Burt King, Siegfried Streufert, and Fred E. Fiedler (Eds.), Managerial Control and Oragnizational Democracy, Washington, D.C., V.H. Winston and Sons, 1978.

Bloom, Benjamin S. (Ed.). Taxonomy of Educational Objectives. New York: David McKay Inc., 1956.

Brooks, William D., and Phillip Emmert. Interpersonal Communication. Dubuque: William C. Brown Co., Publishers, 1976.

Catania, A. Charles. "Eliciting, Reinforcement, and Stimulus Control" in Robert Glaser (Ed.), The Nature of Reinforcement. New York: Academic Press, 1971.

Campbell, John P. & Robert D. Pritchard. "Motivation Theory in Industrial and Organizational Psychology" in Marvin D. Dunnette (Ed.)., Handbook of Industrial and Organizational Psychology. Chicago: Rand McNally, 1976.

Centra, John A. "The Effectiveness of Student Feedback in Modifying College Instruction," Journal of Educational Psychology, 1973, 65, 3.

Centra, John A. Faculty Development Practices in U.S. Colleges and Universities. Princeton, N.J.: Educational Testing Service, 1976.

Centra, John A. "The How and Why of Evaluating Teaching," New Directions for Higher Education, Spring, 1977, 17.

Cohen, Michael D. & James G. March. Leadership and Ambiguity. New York: McGraw-Hill Book Company, 1974.

Combs, Arthur W., Chairman. Perceiving, Behaving, Becoming. Washington, D.C.: Association for Supervision and Curriculum Development, 1962.

Csaky, Nick "Experience Is Everything" in How Does It Feel? New York, Harmony Books, 1979b.

Csaky, Nick (ed.), How Does It Feel? New York: Harmony Books, 1979b.

Csikszentmihalyi, Mihalyi. Beyond Freedom and Anxiety. San Francisco: Jossey-Bass Publishers, 1975.

Csikszentmihalyi, Mihalyi. "Intrinsic Rewards and Emergent Motivation" in Mark R. Lepper & David Greene (Eds.), The Hidden Costs of Reward: New Perspectives on the Psychology of Human Motivation. Hillsdale, N.J.: Lawrence Erlbaum Associates, Publishers, 1978.

Cummings, L.L., Michael J. O'Connell, & George P. Huber. "Informational and Structural Determinants of Decision-Maker Satisfaction," in Bert King, Siegfried Streufert and Fred Fiedler (Eds.), Managerial Control and Organizational Democracy, Washington, D.C.: V.H. Winston & Sons, 1978.

Day, H.I., D.E Berlyne and D.E. Hunt. Intrinsic Motivation. Toronto: Holt, Rinehart and Winston of Canada, Ltd., 1971.

DeCharms, Richard. Personal Causation. New York: Academic Press, 1968.

Deci, Edward L., and Joseph Porac. "Cognitive Evaluation Theory and the Study of Human Motivation," in Mark R. Lepper and David Greene (Eds.), The Hidden Costs of Reward: New Perspectives on the Psychology of Human Motivation. Hillsdale, N.J.: Lawrence Erlbaum Associates, Publishers, 1978.

Deci, Edward L. Intrinsic Motivation. New York: Plenum Press, 1975.

Dewey, John. Art as Experience. New York: G.P. Putnam's Sons, 1934.

Dewey, John. Human Nature and Conduct. New York: Holt, Rinehart & Winston, Inc., 1922.

Dewey, John. Democracy and Education. New York: The Macmillan Company, 1916.

Easterbrook, J.A., "The Effect of Emotion on Cue Utilization and the Utilization of Behavior", Psychological Review, May, 1959, 66,3.

Erez, Miriam. "Feedback: A Necessary Condition for the Goal Setting-Performance Relationship." Journal of Applied Psychology, October, 1977, Volume 62, 5.

Evans, M.G., M.N. Kiggundu, & R.J. House, "A Partial Test and Extension of the Job Characteristics Model of Motivation", Organizational Behavior and Human Performance, December, 1979, 24,3.

Fiedler, Fred E., Martin M. Chemers & Linda Mahar, Improving Leadership Effectiveness, New York, John Wiley & Sons, 1976.

Fisher, Cynthia D. "The Effects of Personal Control, Competence, and Extrinsic Reward Systems on Intrinsic Motivation." Organizational Behavior and Human Performance, June, 1978, 21, 3.

Fuller, Frances & Brad A. Manning, "Self-Confrontation Reviewed: A Conceptualization for Video Playback in Teachers Education", Review of Educational Research, Fall 1973, 43,4.

Gaff, Jerry G. (Ed.). "Institutional Renewal Through the Improvement of Teaching," New Directions for Higher Education, 1978, 6, 4.

Gage, N.L. (Ed.). The Scientific Basis of the Art of Teaching. New York: Teachers College Press, 1978.

Gaylin, Willard. Feelings, Our Vital Signs. New York: Harper and Row Publishers, 1979.

Goldfried, Marvin R. & Michael Merbaum. "A Perspective on Self-Control" in Goldfried & Merbaum (Eds.), Behavior Change Through Self-Control. New York: Holt, Rinehart & Winston, Inc., 1973.

Gorn, Gerald J. & Marvin G. Goldberg, "the Effects of Intrinsic and Extrinsic in Awards in a risk-taking Situation", Journal of Experimental Social Psychology, July, 1977, 13,4.

Grant, Gerald & Riesman, David. The Perpetual Dream. Chicago: University of Chicago Press, 198.

Greene, Charles, "The Satisfaction Performance Controversy." Business Horizons, 1972, 15, 5.

Guzzo, Richard A. "Types of Rewards, Cognitions, and Work Motivations", Academy of Management Review, January 1979, 4,1.

Hackman, Richard J. & Greg R. Oldham, "Development of the Job Diagnostic Survey", Journal of Applied Psychology, 1975, 60.

Hackman, Richard J. & Greg R. Oldham, "Motivation Through the Design of Work: Test of the Theory", Organizational Behavior and Human Performance, 1976, 16.

Hamner, W. Clay. "Reinforcement Theory and Contingency Management in Organizational Settings" in Henry L. Tosi and W. Clay Hammer (Eds.), Organizational Behavior and Management: A Contingency Approach. Chicago, St. Clair Press, 1974.

Hanser & Muchinsky. "Work as an Information Environment," Organizational Behavior and Human Performance, February, 1978, 21, 1.

Herzberg, Frederick, Work and the Nature of Man, Cleveland, The World Publishing Co., 1966.

Hodgkinson, Harold L. "Adult Development: Implications for Faculty and Administrators," Educational Record, Fall, 1975, 55, 4.

Hull, C.L. A Behavior System. New Haven: Yale University Press, 1952.

Jersild, Arthur T. When Teachers Face Themselves New York: Teachers College Press, 1955.

Katz, Joseph, "Personality and Interpersonal Relations in the College Classroom" in Nevit Sanford (Ed.), The American College, New York: John Wiley & Sons 1962.

Kelly, Richard and B. Darrell Hart, "Role Preferences of Faculty in Different Age Groups and Academic Disciplines", Sociology of Education, Summer, 1917, 44.

Kohlberg, Lawrence. "Stage and Sequence: The Cognitive-Developmental Approach to Socialization," in D. Goslin (Ed.), Handbook of Socialization Theory and Research, Chicago: Rand McNally, 1969.

Krathwohl, David R., Benjamin S. Bloom, and Bertram B. Masia. Taxonomy of Educational Objectives. New York: David McKay Co, Inc., 1964.

Krause, M.S. "Use of Social Situations for Research Purposes." American Psychologist, 1970, 25.

Langford, Thomas A. "The Conveyance of Personal Knowledge," in Thomas H. Buxton and Keith W. Prichard, Excellence in University Teaching. Columbia, S.C.: University of South Carolina Press, 1975.

Lawler, Edward E. III, and J. Lloyd Suttle. "Expectancy Theory and Job Behavior." Organization Behavior and Human Performance. June, 1973, Volume 9,3.

Lawler, Edward E. III, Motivation in Work Organizations. Mo Brooks/Cole Publishing Co., 1973.

Lawler, Edward E. "The Multitrait-Multirater Approach to M Job Performance,". Journal of Applied Psychology, 1967,

Lawler, Edward E. & Lyman W. Porter. "The Effect of Perfor Satisfaction," Industrial Relations, 1967, 7.

Leonard, George B Education and Ecstasy. New York: Dela

Lenning, Oscar T. et al. A Structure for the Outcme of Pos Education. Boulder: National Center for Higher Educati Systems, 1977.

Levinson, Daniel et al. The Seasons of a Man's Life, New Y Knopf, 1978.

Lewin, Kurt. A Dynamic Theory of Personality. New York: Co., 1975

Lewin, Kurt. Field Theory in Social Science. New York: H Publishers, 1951.

Lindquist, Jack (Ed.). Designing Teaching Improvement Prog Pacific Soundings Press, 1978.

Lindquist, Jack. "Social Learning and Problem-Solving Stra Academic Performance" in Wayne R. Kirschling (Ed.). "Ev Performance and Vitality," New Directions for Institutio 5, 4.

Locke, Edwain A. "The Nature and Causes of Job Satisfactio Dunnette (Ed.), Handbook of Industrial and Organizationa Chicago: Rand McNally, 1976.

Lortie, Dan C. School-Teacher. Chicago: University of Ch

Lyon, Harold C., Jr. Learning to Feel-Feeling to Learn. C Charles E. Merrill Publishing Co., 1971.

Madsen, K.B. "Theories of Motivation" in Benjamin B. Wolma of General Psychology, Englewood Cliffs, N.J.: Prentice

Malott, Richard, Mary Tillema & Sigrid Glenn. Behavior Ana Modification: An Introduction. Kalamazoo, Michigan: B 1978.

Mann, Richard D. et al. The College Classroom: Conflict, Learning, New York: John Wiley and Sons, 1970.

March, James G. "The Technology of Foolishness" James G. March and Johan P. Olsen (Eds.), Ambiguity and Choice in Organizations. Bergen, Norway: Universitets Forlaget, 1976.

Maslow, Abraham H. The Farther Reaches of Human Nature. New York: The Viking Press, 1971.

Maslow, Abraham H. Motivation and Personality. New York: Harper & Brothers, 1962.

Maslow, Abraham, H. Toward a Psychology of Being. Princeton: Van Nostrand Co., Inc., 1962.

McDermott, John J. (Ed.). The Philosophy of John Dewey, Volume II. New York: G.P. Putnam's Sons, 1973.

McKeachie, Wilbert J. Teaching Tips. Lexington, Ma.: D.C. Heath and Co., 1969.

McKeachie, Wilbert J. "Psychology in America's Bicentennial Year," American Psychologist, 1976, 3.

McKeachie, Wilbert J. "Perspectives from Psychology: Financial Incentives Are Ineffective for Faculty" in Darrell R. Lewis & William E. Becker, Jr. (Eds.), Academic Rewards in Higher Education. Cambridge: Ballinger Publishing Company, 1979.

Miller, G.E. Galanter & K. Pribram, Plans and the Structure of Behavior. New York: Holt, 1960.

Miller, Richard I. "Who Needs Faculty Development--And Why?" in James L. Bess (Ed.), Academic Work: Doing It Well/Doing It Better. New York: Teachers College, Columbia University, 1979.

Miller, M.T. "Instructor Attitudes Toward, and Their Use of, Student Ratings of Teachers," Journal of Educational Psychology, 1971, 62.

Mitroff, Ian I. & Ralph H. Kilmann, Methodological Approaches to Social Science, San Francisco, Jossey-Bass Publishers, 1978.

Miskel, Cecil, "Educator Work Motivation: A Review and Integration of Selected Theoretical and Empirical Efforts". Paper presented at the annual meeting of the American Educational Research Association, Boston, 1980.

Nadler, David A. Feedback and Organization Development: Using Data-Based Methods. Reading, Ma.: Addison-Wesley Publishing Co., 1977.

Nadler, David A., and Michael L. Tushman. "A Diagnostic Model for Organizational Behavior" in J. Richard Hackman, Edward E. Lawler III, and Lyman W. Porter (Eds.), Perspectives on Behavior in Organizations. New York: McGraw-Hill Book Co., 1977.

Nemeroff, Wayne F. & Joseph Consentino, "Utilizing Feedback and Goal Setting to Increase Performance Appraisal Interviewed Skills of Management" Academy of Management Journal, 1979, 22, 3.

Pambrookian, Hagop S. "Discerepancy Between Instructor and Student Evaluations of Instruction: Effect on Instructor," Instructional Science, January 1976, Volume 5, 1.

Pambrookian, Hogop S. "Initial Level of Student Evaluation of Instruction As a Source of Influence of Instructor Change After Feedback," Journal of Educational Psychology, 1974, 66.

Pelz, Donald C. & Frank M. Andrews. "Autonomy, Coordination, & Stimulation in Relation to Scientific Achevements". Behavioral Science, March 1966, 11

Platt, Gerald M., Talcott Parsons, and Rita Kirstein. "Faculty Teaching Goals, 1968-1973" Social Problems, December, 1976, 24,2.

Porter, Lymon W., Edward E. Lawler III & J. Richard Hackman, Behavior in Organizations, New York: McGraw Hill Book Company, 1975.

Pritchard, Robert P., John Hollenback & Phillip J. DeLeo. "The Effects of Continuous and Partial Schedules of Reinforcement on Effort, Performance and Satisfaction," Organizational Behavior and Human Performance, June 30,25,3.

Rachlin, Howard. "Self-Control: Part I" in A Charles Catania & Thomas A. Brigham (Eds.), Handbook of Applied Behavior Analysis. New York: Irvington Publishers, Inc., 1978.

Ronen, Simcha. "Personal Values: A Basis for Work Motivational Set and Work Attitude," Organizational Behavior and Human Performance, February, 1978, 21, 1.

Rotem, Aric & Naftaly S. Glassman. "On the Effectiveness of Student's Evaluative Feedback to University Instructors." Review of Educational Research Summer, 1979 49,3.

Schramm, Wilbur. "Information Theory and Mass Communication," Journalism Quarterly, Spring, 1955, 32, 2.

Seashore, Stanley E. "Defining and Measuring the Quality of Working Life," in Louis E. Davis, Albert B. Cherns & Associates, The Quality of Working Life. New York: The Free Press, 1975.

Sheey, Gail. Passages: Predictive Crises of Adult Life, New York: E.P. Dutton, 1976.

Simon, Herbert A. The Sciences of the Artificial. Cambridge: M.I.T. Press, 1970.

Simon, Herbert A. Administrative Behavior, 2nd edition. New York: The Free Press, 1957.

Skilling, Hugh H., Do You Teach? New York: Richart & Winston, 1969.

Skinner, B.F. About Behaviorism. Alfred A. Knopf, New York: 1974.

Skinner, B.F. Contingencies of Reinforcement. New York: Appleton-Century-Crofts, 1969.

Skinner, B.F. Beyond Freedom and Dignity. New York: Appleton-Century-Crofts, 1971.

Sperry, "Your Personal Listening Profile". New York: Sperry Rand Corporation, n.d.

Staw, Barry M. "The Self-Perception of Motivation" in Barry M. Staw, Intrinsic and Extrinsic Motivation. Morristown, N.J.: General Learning Press, 1976.

Staw, Barry. "Motivation in Organizations: Toward Synthesis and Redirection" in Barry M. Staw & Gerald R. Salancik (Eds.), New Directions in Organizational Behavior. Chicago: St. Clair Press, 1977.

Steers, Richard M. & Lyman W. Porter. "The Role of Task-Goal Attributes in Employees Performance," Psychological Bulletin, 1974, 81.

Smart, John C. & Charles F. Elton. "Goal Orientations of Academic Departments: A Test of Biglan's Model," Journal of Applied Psychology, 1975, 60.

Thompson, James D., Robert W. Hawkes, and Robert W. Avery. "Truth Strategies and University Organizations," Education Administration Quarterly, Spring 1969, Volume 5 2.

Thoresen, Carl E. & Michael J. Mahoney. Behavioral Self-Control. New York Holt, Rinehart and Winston, 1974.

Trent, James W. & Arthur M. Cohen. "Research on Teaching in Higher Education," in Robert M.W. Travers (Ed.), Second Handbook of Research on Teaching. Chicago: Rand McNally & Co., 1973.

True, Michael. "Confessions of a College Teacher at Mid-Career." The Chronicle of Higher Education, February 5, 1979.

Vickers, Geoffrey. "Motivation Theory--A Cybernetic Contribution," Behavioral Science, July 1973, 18, 4.

Vroom, Victor. Work and Motivation. New York: John Wiley & Sons, Inc., 1964.

White, Robert W. Lives in Progress. New York: Holt, Rinehart and Winston, 1952.

Witkin, Herman A. et al. "The Role of Field-Dependent and Field-Independent Cognitive Styles in Academic Evolution: A Longitudinal Study." Journal of Educational Psychology, June 1977, 69, 3.

Yerkes, R.M. & J.D. Dodson, "The Relation of Strength of Stimulus to Rapidity of Habit Formation", Journal of Comparative Neurological Psychology, 1908, 18.