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ABSTRACT

A summary is presented of the literature on motivation relating to achievement in the classroom. Special attention is given to how values, ideology, and various cultural patterns may serve to enhance motivation to achieve in the classroom. In considering what determines motivation and personal investment in educational pursuits, the following factors are discussed: (1) individual personality; (2) teacher expectations; (3) dimensions of academic tasks; (4) sociocultural expectancies; and (5) family background and aspirations. Recent research on motivation and achievement provides discussion on the increasing emphasis being placed on judgments that the individual makes in relationship to perceived situations. Four components that figure prominently in motivation are discussed: (1) self-identity; (2) perceived autonomy and responsibility; (3) sense of direction; and (4) sense of competence. In the final section, certain conclusions are identified that may be useful in planning policy changes to improve schooling. (JD)

Motivational Factors in School Achievement

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Outline

I. Introduction

A. A Perceived Problem

B. Purpose/plan

II. Motivation and Achievement Defined

A. Introduction

B. Motivation Defined

1. Direction

2. Persistence

3. Continuing motivation

4. Activity

5. Performance

C. Motivation as Personal Investment

D. The Motivational Cycle

E. The Payoffs of Personal Investment

1. Achievement

2. Personal Growth

3. Life satisfaction

III. What Determines Motivation and Personal Investment

A. Personality as Cause

B. The Classroom Situation

1. The expectancy dimension

2. Task dimension

C. The Sociocultural Context

1. Meaning and achievement

2. Social organization and structure

IV. What Causes Motivation: An Interpretive Summary

A. Action Possibilities

B. Sense of Self

1. Identity

2. Autonomy/responsibility

3. Sense of direction

4. Sense of competence

C. Goals

1. Task

2. Ego

3. Social solidarity

4. Extrinsic rewards

D. Conditions Affecting Action Possibilities, Self-judgments and Goals

V. Toward Excellence in Schooling: Some Conclusions Relevant to the Present and Future State of U.S. Education

Abstract

The purpose of this paper is to present a summary of what we now know about the causes of motivation relevant to school achievement. Therewith, various school practices, policies and conditions are considered in regard to their potential motivational effects. Special attention is given to cross-cultural comparisons with a view not only to understanding the role of culture in determining motivation but with a view also to considering practices/policies in other countries that might prove beneficial if employed in U.S. schools. It is concluded that there is little or no evidence that the current generation of students has somehow lost the "achievement ethic" or that the public schools are no longer able to motivate students effectively. However, certain changes in practice and policy would conceivably enhance motivation and achievement in schools. An increased stress on excellence and greater time devoted to providing school-related activities are specifically suggested for further consideration in this regard.

Motivational Factors in School Achievement

Introduction

A Perceived Problem

It has been said that as a society we are especially concerned, perhaps obsessed, with achievement. This may or may not be generally or typically true, but it is apparently true at the moment. Issues of achievement are very much in the limelight with the public media repeatedly reminding us that America may no longer be "number one" in industrial productivity and may soon lose its leadership role in science and technology. Simultaneous to such worries about industrial, scientific and technological achievement, there exists this fear that achievement in the schools or lack thereof may be a major component in the overall picture of decline. The role of the schools in contributing to the currently perceived crisis in achievement is at best unclear. What is clear, however, is increasing evidence that the public school is not all that we want it to be. Particularly disturbing is the possibility that achievement in the secondary schools is not on a par with other highly industrialized societies, such as Japan, and that the situation may be getting worse.

At the outset, it should be emphasized that the evidence does not readily allow for simple conclusions about the achievement of U.S. school children. The trends in SAT scores over the last several years are well-known, although not well understood (cf., Wirtz, 1977). Recently, Maehr (in press a) has reviewed the trends in achievement with specific reference to science. Two findings stand out in this review: (1) deterioration in the achievement patterns of college-bound students is not

self-evident; (2) there does, however, seem to be a definite deterioration in scientific literacy among the school population as a whole. The former is a finding which perhaps provides some small degree of comfort. The importance of the latter finding, however, should not go unrecognized. In an advanced technological society it is not only important to create a scientific elite, it is also necessary to create a scientifically oriented citizenry. Like sports, science needs its fans. More than this. Increasingly, a work force is needed that is scientifically--at least technologically--oriented. The possibility that science education in the U.S. is not producing all that it might, is especially disturbing, particularly when a major industrial competitor such as Japan seems to be doing much better. In any case, whether or not educational achievement and productivity in the U.S. have in fact declined, there is reason to believe that the schools could be improved.

Such concerns about improving achievement quite naturally prompt questions about motivation. Certainly, various informal observations of Japanese and American work patterns in school (Easley, Note 1), and on the job (cf., Cole, 1979; Ouchi, 1981) tend to stress motivation as the major cause, suggesting even that the "work ethic" has been lost in our society. Recent work on educational productivity underlines the role of motivation. Estimates of the importance of motivational variables in education vary. The most sustained attention to the topic has perhaps been given by Walberg and his colleagues (cf. e.g., Walberg, Note 2). Generally, their findings indicate that motivation accounts for between 11 and 20 percent of the variance of classroom achievement. In one particular study (Uguroglu & Walberg, 1979), a meta analysis of 40 studies yielded results which

indicated that, whereas the correlation between motivation and academic achievement was .07 in the first grade, it rises to .44 by the end of the 12th grade. At first thought, it may seem that motivation in fact is only a minor explanatory variable, but when it is considered in the light of other factors it is by no means insignificant. Thus, the greater share of the variance is attributable to factors over which the school has little or no control, such as social background of the students. Thus, even though apparently small, the amount of variance explained by motivation represents a possibility for action. Moreover, the variance may not, in fact, be as small as Walberg's estimates suggest. The definition of motivation was a very narrow one and the procedures for assessing it likewise limited. Thus, as Walberg and his colleagues (cf., for example, Kremer & Walberg, 1981) themselves point out, motivation can hardly be ignored in the analysis of educational productivity. It certainly is not the only factor but it is a critical factor with which to reckon. And reckon we shall in this paper.

Purpose/Plan

The purpose of this paper is to summarize the literature on motivation relating to achievement in the classroom. In this review, special attention will also be given to how values, ideology and various cultural patterns may impinge or classroom performance. In this regard, special attention will be given to what cultural patterns may serve to enhance motivation to achieve in classroom contexts. The overriding question throughout will be: What can be done to enhance school achievement? The review of the literature culminates in an examination of specific action possibilities.

Motivation and Achievement Defined

Introduction

Self-evidently, motivation and achievement are important issues in any discussion of the role and work of American schools today. Of course, this is easy enough to assert; it is somewhat more difficult to define how motivational factors may be critical to achievement in the schools. To proceed to this end, it is necessary first to specify what is meant by motivation and achievement. Tedious and tortuous as that may seem, a casual reading of popular as well as technical literature, would indicate that these concepts are not universally understood in the same way.

Motivation Defined

While folklore would have it that motivation has something to do with inner states of the person--needs, drives, psychic energies, unconscious wishes, etc.--that folklore has also confused the issues. As a result, discussions about motivation can be, often unwittingly, discussions about widely disparate problems. For this reason, it is important at the outset to consider more precisely the behavioral patterns which make teachers, researchers, principals, and parents think that motivation is involved in any given instance.

Whenever persons talk about motivation, they seem to refer to a wide variety of activities. For the most part, however, motivational talk relates to five identifiable behavioral patterns. The study of motivation begins with observations of the existence and variations in these patterns; the goal of motivation research is to understand, predict and perhaps control such variation and existence.

1) Direction. The apparent choice among a set of action possibilities is a first indicator of motivation. When an individual attends to one thing and not another, it is then that we are likely to infer that he is motivated in one, but not another way. The choices that individuals make between behavioral alternatives suggest motivational inferences. When a student elects to take an after-school computer course rather than try out for the basketball team . . . it is at this point that we make motivational inferences. Similarly, as one child works busily at her desk while another "socializes," we are likely to use the term motivation. In the case of school, work, or play it is the apparent choice among possibilities that prompts us to infer motivation.

2) Persistence. Persistence is the second behavioral pattern that forms the basis for motivation inferences. When an individual concentrates attention on the same task or event, for varying periods of time, it is then that observers are likely to infer varying degrees of motivation. When students work at a task for an extended period without being distracted, it is inferred that they are "highly motivated." Long hours spent in the laboratory are taken as an index of a scientist's motivation. And one can multiply such examples across almost any area of human activity.

3) Continuing Motivation. A behavioral pattern that is strikingly suggestive of powerful motivational forces is the return to a previously encountered task or task area "on one's own" without apparent external constraint to do so. It is the child who proceeds to use a free moment to do additional problems, or check out an extra book to find out a bit more about insects, or try out a physics experiment in

his father's workshop--who is thought to be "really motivated." Maehr (1976; cf., Fyans, Kremer, Salili & Maehr, 1981; Maehr & Stallings, 1972; Salili, Maehr, Sorensen, & Fyans, 1976; Sorensen & Maehr, 1976) has referred to this pattern as "continuing motivation" and explicated its nature and origins in a preliminary way, relating it particularly to work on intrinsic motivation (Deci, 1975). In passing, it may be noted that, while from the standpoint of motivation theory this may be viewed as "just another index of motivation," continuing motivation takes on special significance for teachers, particularly in the early grades. As discussed by Maehr (1976) elsewhere, continuing motivation is a crucial educational outcome for many educators, the thing they are really trying to produce. While continuing motivation may be viewed as similar to persistence, it has its own distinguishing characteristics. Whereas persistence is characterized by uninterrupted attention to the task, continuing motivation involves a "spontaneous" return to a previously encountered task or task area.

It is worth noting that continuing motivation, persistence, and apparent choice may be viewed as instances in which the same direction in behavior is retained. In other words, the person repeatedly chooses the same (or closely similar) behavioral alternatives while simultaneously rejecting other alternatives. In an important sense, then, these three behavioral patterns are really all separate examples of a choice that is made or a behavioral direction that is taken.

4) Activity. Activity level is a fourth behavioral index of motivation. Some persons seem to be more active than others; they do more things; they seem to have more energy. While this basic observation has merit, several qualifying factors should be noted. In some

ways, activity level is a more complex and less reliable indicator than choice, persistence and continuing motivation. More so than in the case of the three previous patterns, physiological factors are likely to be implicated, thus complicating matters considerably. Of greater importance is the fact that in most classroom situations, the assumed differences in motivation are typically not attributable to activity, but to direction (cf., Maehr, 1974b). But, whether or not activity level is a predominant indicator of motivation in the majority of classrooms, it is most certainly a pattern to be taken into account in the wider scheme of things.

5) Performance. The final example of a behavioral pattern which characteristically prompts motivational inferences is variation in performance. If variation in performance cannot be readily explained in terms of variation in competence, skills, or physiological factors, then a motivational inference is frequently made. Teachers can readily cite instances where good students fail as well as cases where bad students show sudden improvement. Sometimes, these slumps and jumps can be related to the acquisition of a necessary skill. Sometimes, physiological factors, such as illness are involved. When such explanations are, for one reason or another, found wanting, a motivational explanation is likely to be invoked.

It should be stressed that performance level is in no sense a pure measure of motivation. Performance level is a product of a variety of factors, including a combination of the motivational patterns already reviewed. That is, choice, persistence, continuing motivation, and activity level are all likely to be reflected

in performance level. One might even argue that it is at best a very crude measure of motivation. Yet, it is a behavioral pattern that is typically taken seriously in the discussion of motivation, perhaps because performance level is often the "bottom line" in a rationale for studying motivation. In any event, because variation in level of performance often leads to motivational inferences, this particular pattern of behavior finds a rightful place in the present taxonomy.

These clearly overlapping behavioral patterns may or may not be all-inclusive. Most certainly, they need further elaboration as specific instances and issues arise. They need specification as measurement and research procedures are constructed. Moreover, it may be fairly argued that they do not in each instance represent "pure observations" but rather judgments about behavior. But for the moment, they suffice to suggest what it is that we are talking about when we say that a person is or is not motivated. When, for example, the teacher asks how she can motivate students, she is probably asking how she can direct students to do one thing (e.g., reading) and avoid other things (e.g., socializing, fighting, or daydreaming). Further, she is concerned with some degree of persistence at these activities and, most especially, hopes that they occur, not only when she demands it, but in free moments at school, in the home, or elsewhere. Moreover, she expects--and rightly so--that persistence and continuing motivation to attend to the "right" activities will eventuate in increased levels of performance. In other words, it can readily be argued that the previously defined behavioral patterns are, in fact, what most people are talking about when they talk about motivation. Questions about the motivation of students must somehow relate to such patterns. It is

these behavioral patterns that are the basic data which prompt motivational concerns and provoke motivational explanations.

Motivation as Personal Investment

While there is obvious value in stressing the primary data base for motivational inferences, there is also value in considering whether there might be certain unifying principles which underlie these somewhat disparate behavioral patterns. What type of conceptual scheme might bind these patterns together? In this regard, the metaphor of "personal investment" may prove helpful. Kelly (1982) and others (cf., Kuhlen, 1964) have used this term in discussing a wide array of activities that individuals pursue, the weight they place on these, and the general direction of their lives. The metaphor implicit in the term "personal investment" possibly does capture the underlying meaning of the somewhat disparate patterns associated here with "motivation." That is, when behavioral direction, persistence, performance, continuing motivation and variation in activity level are observed, one might suggest that a person is in effect investing his/her personal resources in a certain way. Personal resources, in this case, refer largely to time, talent, and energy.

Note that the image here is primarily one of distributing resources. The stress is not on the availability of the resource. The stress is on motivational differences rather than deprivation (cf., Maehr, 1974b, 1978; Maehr & Nicholls, 1980). Without denying the possibility that differential levels of motivation may characterize different persons, the emphasis is on the direction of behavior, on the choices and preferences exhibited. It has been argued that the assumption of motivational differences rather than deprivation is desirable in the study of motivation in persons of varying social and cultural background (cf., Maehr 1974b, 1978; Maehr &

Nicholls, 1980). It may also be argued (cf., Maehr & Kleiber, 1981) that this must be the initial assumption in making cross-age comparisons, but clearly one cannot rule out the existence of differential levels of motivation. Just as individuals may distribute their resources differently, so they may also have more or less to distribute. Personal investment is a felicitous term for expressing the dual possibilities that persons may exhibit both qualitative and quantitative differences in motivation.

Parenthetically, it might be suggested that it is generally wise to avoid assuming too quickly that a child is simply lacking in motivation and consider rather that the classroom situation simply is not eliciting his/her effort. It is simply too easy and too self-defeating and in most instances downright wrong to attribute a child's classroom behavior to a lack of motivation, to something that is wrong about him or her. Too often such judgments are reserved for children from backgrounds not well understood by the educational establishment and applied in a stereotypical fashion (cf., Maehr, 1978). But one cannot rule out the possibility that individuals do vary not only in how, when and where they are motivated but also in their overall level of motivation.

The Motivational Cycle

The definition of motivation in terms of behavioral patterns and personal investment should go a long way in specifying motivation. It may also be helpful to define the role of motivation in relationship to other processes and events. One way of doing this is to describe a typical motivational cycle in a particular behavioral setting. Figure 1 outlines the motivational cycle as it might exist in a classroom setting.

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There are several facets of this cycle that deserve special comment. First, motivation as evidenced by choice, persistence and activity level is viewed as a primary antecendent of performance level. However, it in turn is affected by the performance that eventuates, particularly by how it is appraised.

Second, motivation does not typically influence performance in a direct and simple manner. Invariably, other factors are involved. Primary among these is the skill of the person performing. But other factors are equally, and sometimes more, important: Notably, the organization of the task. Then, there are also interpersonal factors: Whether, for example, a peer provides a distraction. The point, simply put, is that one can imagine effective and ineffective effort. If the task to be accomplished is poorly defined, badly organized or if the necessary tools are not effeciently available, then sincere effort may be misdirected or misused. One can be motivated but still "spin one's wheels."

A third feature of the cycle is that the performance characteristically eventuates in outcomes. These may be readily evident to the student without any input from a teacher, as in many individualized instructional programs. But in many cases, perhaps in most cases, there is typically a performance appraisal process involved in which significant others (teachers, parents, peers, et al.) play an evaluative role. It is the outcome as socially defined and as perceived by the student that feeds back into the motivational cycle (cf., Frieze, 1980; Freize, Shomo, & Francis, 1979).

The Payoffs of Personal Investment

The terms motivation and personal investment place no value judgment on how a person uses her time, talent and energy. Fine and well--for

some purposes. Educators, however, can hardly consider motivation and personal investment without focusing on payoff. What comes from a certain distribution of one's personal resources? Is it good or bad? If one or the other, is it equally so from different perspectives, from the person's own as well as society's perspective? Obviously, this is in many ways the heart of the issue as far as school achievement is concerned. The question is not whether or not the student is motivated but whether the student is motivated in a way that is assumed to be desirable. There are many desiderata that possibly stem from an investment in the educational process. Somewhat parallel to distinctions made by Kohlberg and Mayer (1972), several types of payoffs will be briefly described.

Achievement. Achievement is a first payoff from personal investment that might come to mind. But having said that it is necessary to amplify a bit what is meant by this ubiquitous and elusive concept. When educators worry publicly about decreasing SAT scores they seem to mean one kind of thing: school achievement. When the captains of industry worry about achievement, they seem to mean something else: economic productivity. Historians too have a stake in all this as they wonder about why societies wax and wane. And, the "International Community" continually confronts the dilemma of governments, officials and laborers that resist progress, preferring the old ways to the new and, in all, apparently lacking a capacity to make the most of their opportunities.

Clearly, achievement means a lot of different things. Moreover, one should not really define achievement in such a way that such a wide array of meanings is ignored. Especially, if one's primary focus is on education, one can hardly ignore achievement in all of these different senses and,

ideally, achievement should be defined in such a way that it relates to the critical element of each of these facets of life. But not only should it be defined in such a way that it includes a broad array of activity areas, it also should be defined in such a way that it allows for a systematic analysis--in the present context that also means an analysis in terms of social and psychological sources.

To define achievement so as to embrace such a variety of behavior is a tall order. Fortunately enough, there are some precedents to advise us (cf., McClelland, 1961; Maehr, 1974a, 1974b). Any definition is likely to appear somewhat arbitrary, at least at the outset. Thus, it is with our definition. Having relieved ourselves of such disclaimers, we may then proceed along a bold course and suggest what achievement is, at least for the purposes of beginning our discussion.

In the first place, achievement involves <u>performance</u> of some kind; something that is done and is, therefore, observable and measureable. But not everything done should be termed achievement. The term should be reserved for those instances where some kind of <u>standard of excellence</u> is applicable. Generally, the standards are socially derived or related. Achievement is usually thought of in terms of SUCCESSES and FAILURES in accomplishing things that a given society deems valuable. School achievement is a case in point, as is achievement in a career. Third, achievement is something done by a <u>person</u>. There are at least two implications of this assertion. In the first place, note should be taken of the fact that achievement may be viewed as something that is characteristic of societies, groups and institutions, as well as persons. In this paper, however, the

primary interest will be on individual achievement. Secondly, the individual must be an actor in any event for it to be considered an achievement; the focus is on individual initiative. Finally, uncertainty in outcome must be considered a characteristic of significance. Behavior entered into without any question of outcome is hardly behavior which merits the label achievement. The probability of both success and failure may indeed vary but there must be the perceived possibility of both success and failure for a situation to be termed an achievement situation. Achievement implies confronting challenges to one's competence.

In sum, achievement involves a personal accomplishment, something that is attributed to one's ability and effort. It is also something that is valued not only by the person or which only serves his/her own ideosyncratic needs, it has social significance. can imagine one investing oneself totally in watching "soaps" or in computer games without achieving things. Indeed, one can surmise that much of human capital is invested in ways that really yield little in the way of accomplishment as this has just been defined. This does not in itself necessarily mean that it is good or bad. Yet, it is fair to say that any society can or will only tolerate so much nonproductive investment. Each society, for survival's sake, demands that human resources yield a certain level of what is here termed achievement.

Personal growth. Personal growth is a second outcome of personal investment that can be considered. The question here is whether investing oneself in a given endeavor leads to an enhancement of one's ability, skill, or competence. Children, adults and older persons do not necessarily choose tasks which enhance their competence. Individuals are more or less likely to invest themselves in activities and tasks which enhance their

ability and certain stituations may encourage or discourage such investment. Three attorneys may use whatever free time they have quite differently. One may enroll in an M.B.A. program hoping not only to upgrade his skills but also to move his career along. Another may choose to enroll in a course in ceramics, just because he finds fulfillment in doing things with his hands. Still another takes every chance to sail, simply because this allows him to test the limits of his intellectual and physical abilities. Enhancement of one's ability may be involved in each case but clearly in the first case the goal is achievement while in the latter two it is personal growth. In still another case, one could imagine an attorney spending his free time fishing with little evident payoff or interest in enhancing skills or abilities. Certainly, all these activities can have their place but just as certainly they may have different effects on the course of a person's life. They may pay off quite differently.

Life satisfaction. Finally, there is the issue of life satisfaction and general mental well being. One can think of a number of questions to pursue here, but it may suffice to cite merely an example or two.

First, there is the simple issue of whether personal investment patterns seem to be associated with different levels of satisfaction. Personal investment patterns that lead to personal growth may seem desirable. Personal investment patterns that eventuate in achievement may be highly valued by our society--but what makes a person happy? Of course, that question cannot be fully and satisfactorily answered here or elsewhere. It is clear, however, that a discussion of motivation and personal investment must consider the affective payoffs. There is an acquaintance of mine who, when

told of the outstanding achievements of someone almost invariably remarks--"but is he/she happy?" Such comments can sometimes be passed off as mere "sour grapes." Yet, underlying such comments are important concerns. Does investing oneself in such a way as to excel in an area carry with it a certain price in terms of life satisfaction. A recent study of highly talented and gifted performers indicates that it may. Bloom and his colleagues (Bloom, 1982a; 1982b) have been studying "world-class" performers in music (pianists), art (sculptors), sports (tennis, swimming) and science (mathematicians, neuroscientists). While there are many facets to the study which are intriguing, there is one that fits in with the present issue: some price in family solidarity and satisfaction was paid by these individuals, but in no sense did it seem that this extreme investment in achievement characteristically eventuated in deep regret, severe dissatisfaction or serious neurotic symptoms. But this study does not, of course, settle the issue absolutely. It only serves to illustrate the relevance of the question. Of course, there is considerable debate within educational circles related to the importance of satisfaction as an outcome of schooling. The so-called "affective education" movement places high priority on such a payoff, sometimes viewing it as virtually the sine qua non.

In sum, achievement, personal growth and life satisfaction are possible payoffs that emerge when a particular course is taken. One can imagine other payoffs and one can also imagine that in most cases people experience all three and a few others as well. The thing that should be considered is that there is purpose in analyzing the course which a pattern of investment may take so far as fulfilling certain valued ends may be concerned.

What Determines Motivation and Personal Investment?

As necessary as it was to set forth the basic issues, it may also have been tedious. At least, it is high time to get to the questions: What causes individuals to invest themselves in certain ways? What factors influence motivation? What do we know about motivation and school performance? Research on such questions can be categorized and summarized under three overlapping categories, as outlined in Table 1.

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Personality as Cause

A common assumption about motivation, particularly motivation which leads to achievement, is that some have it and some don't. In other words, it is thought that some have a built in personality trait (or traits) that likely lead them to accomplishing things. Perhaps no one has explored this possibility more thoroughly and extensively than David McClelland, his colleagues, and students. In a series of studies, beginning in the 1940's, McClelland (cf., McClelland, 1961, 1971, 1978; McClelland & Winter, 1969) mapped out the basic territory for the study of motivation and achievement. While asking most of the basic questions that had to be asked on the topic, this program tended to emphasize particularly the role of enduring personality patterns in determining motivation in achievement situations.

Perhaps the most dramatic accomplishment of McClelland has been to consider how personality affects culture or society. The logic of his bold hypothesis is simple enough. Within each society, certain early learning experiences are, willy nilly, established for the child. This

early learning may be more or less effective in fostering achievement motivation. To the degree that it is effective, it will create a pool of potential leaders who happen to be achievement motivated. Assuming that there is nothing to prevent the society from drawing its leadership from this pool, an achievement motivated leadership should come to dominate the society's affairs. The ultimate result is that the society as a whole should act like an achievement motivated person, and within its capacity to do so, achieve. While one might, in theory, define societal achievement rather broadly, McClelland focused especially on economic achievement, a type of achievement which may be relatively easy to measure in comparing differing societies. Now, several points should be kept clearly in mind here. The childrearing practices which are predominant within a society are a variable. That is, not only will societies differ from each other in how children are raised, they will, over time, exhibit striking variations in their own practices. Thus, war, population changes and ideological shifts, such as occurred with the Reformation (cf., Weber, 1930), may effect major changes in childrearing practices. One may also guess that McClelland would now add that "great society" intervention programs could be similarly influential. It is such changes in childrearing practices that should play a major role in later variation in societal achievement.

Amazingly enough, across a wide variety of cultures and against seemingly insurmountable odds, McClelland did, in fact, find evidence that the existence of achievement-oriented childrearing practices at some point in time were likely to eventuate--25 years later--in an "achieving society." Basically, this evidence consisted of correlations between the economic

achievement of a society (adjusted for potential in terms of natural resources) and an index of the learning environment that would have been experienced by the then adults of the society when they were children. While these correlations are not high and there are anomalies in the data, it does seem that McClelland's bold hypothesis is more than mere speculation. A society does insure its future as it rears its children. That has been said before, but McClelland may be the first to put that truism to such extensive, empirical test.

While McClelland's work has opened up many of the questions associated with the understanding of motivation and achievement, it did not solve all the problems nor does it provide the prevailing guide for research today. Ample criticism of this work is to be found elsewhere (cf., Maehr, 1974b, 1978; Maehr & Nicholls, 1980). Aside from the criticism, an important residue remains from these initial efforts which still has relevance in current work on motivation and achievement. More or less directly, McClelland's research emphasized that early learning experiences may play a continuing and pervasive role in determining how individuals respond to achievement situations. Putting it bluntly, this research underscores the possibility that certain individuals, and perhaps certain groups acquire a "motivational talent" which they exercise rather generally, even as circumstances change rather drastically. Whereas the German sociologist Max Weber (1930) stressed that the "protestant ethic" may explain the rise of capitalism and its effectiveness in Northern European countries, McClelland substitutes a psychological process called achievement motivation. More generally, McClelland and his co-workers provided

a preliminary scientific basis for the commonly held belief that motivation, particularly achievement motivation, is a function of a general personality trait. Certain persons simply have it and exhibit it across a wide variety of situations and circumstances. Possibly, certain societies have it also.

Contemporary work on motivation and achievement is less inclined than was McClelland and his co-workers to think of a general motive-trait associated with achievement. Rather, the emphasis is on a number of thoughts, feelings, beliefs and meanings that the individual may hold and on how holding these eventuates in achievement. Thus, it is interesting that one of the strongest predictors of achievement behavior uncovered in the so-called Coleman report (Coleman & Associates, 1966) was perceived locus of control (cf. also, deCharms, 1968; Dweck, 1975; Dweck & Goetz, 1978; Dweck & Reppuci, 1973; Stipek & Weisz, 1981). As individuals felt they had a greater control over their immediate situation, they were more likely to behave effectively in that situation. During the last ten years or so, this simple proposition has been extensively elaborated under the influence of what is called "attribution theory" (cf., e.g., Weiner, 1979). In particular, research on motivation in educational settings has tended to fixate on how individuals assign causes for their behavior and how this in turn affects what they do.

While this stress on attributions has been more open to considering how the immediate situation determines motivation, consideration is also given to the proposition emphasized by McClelland and his colleagues: experience imbeds itself in enduring behavioral predispositions. Early experiences in and out of school influence how children feel about their

abilities, and about the relevance and value of various activities. Such feelings are found to be critical antecedents of school achievement. Focusing first on thoughts that children have about the causal origins of school achievement, it seems reasonably clear that persons who believe in their ability are likely to seek out and perform on tasks that serve to challenge, and enhance further, their ability (cf. e.g., Fyans & Maehr, 1979; Maehr & Willig, 1982). The diabolic side of this, of course, is that negative judgments about one's ability to succeed eventuate in patterns of behavior that actually work toward fulfilling that possibility in fact. In sum, an enduring belief about one's ability serves as a self-fulfilling prophecy. Moreover, as the study by Fyans and Maehr (1979) reveals, these judgments about ability are already well established in the 4th grade.

While more recent research has tended to focus especially on these subjective judgments about one's ability, it is clear that the value of the task to the person is likewise important. Early on, McClelland and his colleagues (McClelland, 1961) stressed the value component in achievement, particularly in considering the patterns of individuals from different societies and sociocultural groups. This point has more recently been stressed by Triandis (see e.g., Triandis, 1972; Triandis & Associates, 1973), Fyans et al. (in press), Parsons and Goff (1980), and Maehr (in press-b), but has not been as thoroughly researched as one might expect. Perhaps because it seems so self-evident that one does what one values, few have analyzed the concept of valuing as a psychological process and fewer still have put much effort into relating it to differential achievement patterns. The importance of values, however, is pointed up in the

findings of a recent study (Willig, Harnisch, Hill, & Maehr, in press). In this study, it was found that the achievement of black students was not as easily attributable to their ability perceptions as it was to the value they placed on school tasks.

In reviewing the research on personality and motivation, there are several basic conclusions that can be reached. First, it is difficult to ignore a continuing effect of previous experiences on the way one approaches achievement situations. In particular, one's beliefs about oneself as adequate to perform certain tasks is critical. So are various acquired beliefs about what is valuable. These basic motivational orientations are often formed outside the school setting and not always readily amenable to change by the teacher. In special cases, intervention programs have proven successful (cf. e.g., deCharms, 1976; Maehr & Lysy, 1978; McClelland & Winter, 1969). They are also expensive. It is important for teachers to realize that they doubtless can affect these patterns to some degree, sometimes unwittingly, negatively as well as positively. However, if enduring personality traits were the sole determinant of motivation in the classroom, teachers might, quite rightly, despair of making a positive contribution. In most instances, what can he/she do about the previous experiences the child may have had? What can he/she do about the world outside the classroom? Fortunately, personality is not the sole cause of classroom behavior. The nature of the classroom situation is important and we turn to that category of causes next.

The Classroom Situation

Under the first category of causes, personality, emphasis is placed on the experiential background of persons, what they bring to any given

achieving situation as the result of where they have been, psychologically. Growing up in one particular sociocultural setting tends to have different effects than growing up in another. As a result, one might expect that individuals from different sociocultural backgrounds differ in the more or less enduring achieving orientations they bring to the situation. Since each person brings a slightly different package of meanings to the situation as the result of previous experiences, one can also expect individual differences in these enduring motivational patterns. These two general expectations are confirmed in the available evidence. However, it is also clear that past experience alone does not determine present motivation patterns. The present situation counts! Precisely because it does, extensive research has been devoted to determining the characteristics of situations that affect motivation.

The expectancy dimension. In each social situation there exists a set of expectations for the individual. By no means are these expectations divorced from earlier social and cultural experiences of the person involved but the point is that it is the expectations that exist for or in that situation which are of immediate importance.

In a classroom, as in any social group, social organization occurs quickly. Norms and roles emerge and status levels are assigned. This social organization occurs somewhat apart from the planned curriculum. It is often peer initiated and peer controlled. The relevant point to be made in this regard is that such organization of the situation is accompanied by expectations for the participants. As a result, the social group may, indeed typically does, hold a general norm for appropriate levels of achievement, punishing the "rate buster" and rejecting the

laggard. Most teachers are aware of this phenomenon. What we all may be less aware of is that within each group hierarchy a set of different expectations for individual achievement may evolve. Further, the role that an individual plays in a group is accompanied by different expectations for achievement. Such expectations are in turn followed by varying achievement effort. And, interestingly enough, even the temporary assignment of a leadership role seems to be followed by increased achievement motivation (Zander & Forward, 1968). Thus, higher status persons seem to be encouraged to achieve, whereas lower status persons are discouraged (Maehr, 1974a, 1974b, 1978). In sum, an individual's peers have important effects on motivation as they convey achievement expectations. Change the situation, the peers, or both, and the child's motivation will often change--and sometimes drastically so.

A second type of expectation is that which is conveyed by significant others, such as teachers. Teacher expectations have been a special focus for the last several years (Maehr, 1978; Parsons, Heller & Kaczalla, 1980; Rosenthal & Jacobson, 1968; Rubovits & Maehr, 1975). The research on teacher expectation effects suggests rather clearly that the expectations that the teachers hold tend to relate to the quality of interaction that they initiate with students. It is likely that their expectations are not always conscious and on a number of occasions can be shown to be quite invalid. What is particularly disturbing is the evidence that their expectations in some cases serve as self-fulfilling prophecies. Weiner and Kukla (1970), for example, suggest that teachers fulfill such expectations as they attribute student performance to ability, effort, task difficulty or luck. If the child succeeds and the teacher emphasizes how difficult

the task was, she or he receives an authoritative message about his or her level of competence in what he or she can do by trying. Obviously, teachers are regularly in the business of evaluating level of performance and are perhaps unwittingly teaching the child the causes of the performance level (e.g., ability, task difficulty, luck and effort). By failing to monitor the relationship between their own expectations and the ways they interact with different students, however, teachers may also unknowingly set low ceilings for performance from students who are capable of more. Perry (Note 3), for example, reports that teachers provide more probing types of feedback when they hold high expectations for the performance of students. Interactions of this sort can obviously have a cumulative effect and penalize the student who fails to make an early good impression as a potential high achiever.

All in all, the point is that any discussion of why a student does or does not invest his/her time, talent and energy in a particular situation must consider the expectations that exist for this student in that particular situation. Roles, status and group membership are particularly important in initiating the expectations that will exist for the person in any given situation.

Task dimensions. It is self-evident that the task itself may be a significant determinant of motivation in the situation. In regard to the task there are several sub-factors that need to be kept in mind.

First, the task may have structural features which affect motivation. In common sense language: some tasks are simply in and by themselves more interesting than others. Why this is true is not altogether clear, but research on intrinsic motivation (cf., Deci, 1975) seems to suggest

that a task that possesses a certain optimum level of uncertainty and unpredictibility tends to be generally attractive. While social experiences can reduce the search for novelty, new information and challenge, it appears that, from the start, there is a built-in attraction to these features in tasks.

Second, a given task may have specific meaning in a given sociocultural context. Is it an acceptable area in which to perform? One's social or cultural group may define it as desirable, repulsive or irrelevant. In this regard, Barkow (1975) points out that the prestige ranking of a task within a particular cultural group may by itself best explain the motivation exhibited by members of that group. Further, it has repeatedly been pointed out (cf., Maehr, 1974a; Raynor, 1974, 1982) that tasks may be viewed as more or less instrumental to valued ends, success in the performance of them may to varying degree confirm one's identity or enhance one's view of oneself.

Third, success and failure in performance of the task is a critical facet of the achievement situation and an important determiner of motivation. A child who does well in science but poorly in math, is likely to be turned on to the former and turned off to the latter. Sears (Note 4) has given performance a prominent role in what she calls the "academic syndrome." In her model, high performing children express positive attitudes toward academics, see themselves as doing well and are perceived by others as doing well, which in turn leads to more task-oriented work and further achievement. A pivotal component in this scheme of things is that the child must experience his or her performance positively, or as a success. That is, it is the subjective definition of success that

counts (cf., Duda, 1980, 1981; Ewing, 1981; Frieze, 1980; Frieze et al., 1979). This subjective definition of success is in turn a function of the goals that the individual holds in the situation. One experiences success as one reaches a goal set and valued by him or her. This, of course, suggests that success and failure are inevitably tied in with the value dimensions outlined previously.

In reviewing task-related factors that determine motivation it is natural to move quickly from physical and structural features to the social psychological conditions which surround task performance. In this regard, performance appraisal looms as a potentially critical factor. Going beyond the mere communication of success and failure, it appears that the way performance appraisal is carried out may have far-reaching and unintended consequences. Thus, for example, a growing number of studies (Fyans et al., 1981; Hill, 1980; Maehr, 1976; Maehr & Stallings, 1972; Salili et al., 1976) has indicated that placing stress on tests and on the teacher's evaluation of performance can have essentially negative effects. While an emphasis on such external evaluation may momentarily enhance the performance of some students, it also has negative effects on continuing motivation (Maehr, 1976). That is, students are less likely to continue working on the tasks on their own, seeking new challenges and new opportunities in this regard. In other words, they may perform for the evaluator or when the implied reward/punishment of the evaluation is present. Remove this, however, and their motivation decidedly wanes. Apparently, the evaluation conditions tend to affect the individuals definition of the goals implicit in the task (cf. Maehr, in press-a, in press-b). Specifically, external evaluation tends to rule out the establishment of more intrinsic, task-related, goals.

Therewith, students are likely to be responsive only when extrinsic rewards are a prominent feature of the situation. Assuming that a major goal of instruction is to foster a continuing and independent interest in the subject matter, it is clearly desirable to foster a task-goal orientation. Reducing the emphasis on external evaluation tends to serve this purpose. Moreover, an emphasis on external evaluation may also foster a kind of competitive atmosphere which may ultimately prove counterproductive for most students (Ames, 1978, 1981; Ames, Ames & Felker, 1977; Hill, 1980).

Similar to and perhaps implicit in the issue of evaluation and performance appraisal are matters of the degree of freedom and choice that can be allowed in the performance of an instructional task. A number of recent studies have taken up this issue and the results are instructive. A study conducted by Wang and Stiles (1976; cf. also, Wang, 1981) is, first of all, of interst. They conducted an investigation in which the effects of student selection and teacher selection of school work schedules were compared. Results indicated that students were more likely to complete assignments in the former than in the latter condition. In many ways the most dramatic case of experimenting with the effects of freedom on learning is presented by deCharms (1972, 1976). Motivation of the inner city subjects was enhanced as they participated in educational planning and decisions--and as they could exercise some reasonable degree of choice over what they could do in the classroom.

In more general terms, it was "open education" that ideally presented the opportunites for optimum choice, freedom and independence in learning. And interestingly, in spite of all the negative things that have been said about "open education" there is evidence that it may not be all that bad

after all. Thus, Horowitz's (1979) extensive review indicates basically two things of importance in this regard. (1) While "open education" has not been shown to be superior in terms of standard measures of classroom achievement, neither has it been shown to be inferior. (2) "Open education" does seem to emerge as superior in the creation of affective outcomes which might logically be expected to have an enduring influence on achievement patterns that reach beyond the classroom experience or the school as such.

A recent and extensive study (Pascarella, Walberg, Junker & Haertel, 1981) discloses the importance of freedom in learning, particularly in the area of science. This investigation made a special point of examining the classroom environment correlates of continuing motivation in science, using data gathered in the National Assessment of Educational Progress. While teacher control was found to be positively associated with science achievement for both early and later adolescent boys and girls, it was negatively associated with the measure of continuing motivation in science. Apparently, educational conditions which emphasize control of student behavior in the classroom may attain desirable effects of an immediate and short-term nature. Simultaneously, however, they may discourage continuing motivation.

It should be clear, then, that there are a variety of factors implicit in the way an instructional task is designed and presented that will likely affect motivation. Certainly, the above outline of such factors is more illustrative than exhaustive, but it should serve to underline the essential importance of what goes on in the classroom. The complementary factors of social expectations and task design account for a considerable share of the variance in motivation and achievement across classrooms.

The Sociocultural Context

Aside from "personality" and the classroom situation, there is the possibility that the wider sociocultural context may also play a role in affecting motivational patterns. In reviewing the role of personality in determining achievement it was inevitable that we would touch on the possibility that societies and cultures may vary in the degree to which they foster the development of achieving orientations in children. Little direct evidence that this was the case is cited, but this question doubtless is implicit in much that was said earlier. In considering the classroom situation, it is impossible to ignore extant societal and cultural differences. Thus, expectancies, norms and roles were said to form an important part of the classroom situation. To some extent these expectancies are sui generis, arising in particular classrooms as a function of what goes on in those classrooms, more or less irrespective of the wider culture. But in at least two ways the wider world regularly intrudes into the classroom situation. Children and teachers inevitably participate in a wider social and cultural world even as they behave in the smaller world of the classroom. While classrooms may necessarily have a somewhat similar structure regardless of society and culture, they may play slightly different roles and may be able to exploit different possibilities within a given setting. It is important, therefore, to consider some of the ways in which the wider sociocultural context may impinge on what goes on in the school. Is there, for example, something about Japanese society and culture of the moment that is likely to be especially effective in facilitating achievement? Has the U.S. perhaps lost something of the achievement ethic in recent years and therewith is experiencing a loss of care and concern for performing well in school?

Meaning and achievement. One cannot answer such questions easily, of course. What we can do is examine whatever evidence is available, evaluate it and derive whatever conclusions seem plausible. While there are many facets to such broad--yet highly important--questions, for convenience sake, I will only consider two. The first concerns ideology: What does achievement mean in a society? What do people believe about it? How do they value it?

It was the German sociologist, Max Weber (1930), who foisted the concept on modern social science that societies might wax and wane as they were guided by an achievement ethic of some kind. As noted earlier, this basic theory was elaborated on in a special way by David McClelland (1961). As a psychologist, McClelland focused particularly on how children may be reared so as to acquire not only achievement values but also, fears and hopes which could assure an orientation toward achievement. Earlier, our discussion focused particularly on how sociocultural background, particularly what happened in the family, might influence children's enduring motivational patterns. Now the question is much broader: Does the society as a whole tend to foster values, beliefs, and goals which are likely to encourage the pursuit of excellence? Do some societies tend to do this more than others?

There are at least two lines of research that can be considered in this regard. A first line of research has been at least indirectly referred to in other papers presented to the National Commission on Excellence in Education. Basically, this evidence is derived from the extensive study of schools and achievement conducted by the International Education Association (IEA). Several of the questions seem to get at motivational issues,

at least indirectly. Thus, Holsinger (Note 5) reports the results of student responses to several items which might be assumed to reflect motivation. Examples of such items are:

Is it important to you to do well in school?

I want as much education as I can get.

Do you worry about doing well in class?

Generally, U.S. students do not, in any sense, seem to be less motivated toward school achievement than other students. Indeed, from these data, limited as they are, one might argue that U.S. students seem to be highly motivated toward school achievement. It is troublesome, however, that the method of assessing motivation was not derived from or ...ly integrated with motivational theory. At best, the motivational items are superficial in nature and limited in scope. Equally, if not more important, is the fact that they relate to previous generations of students. It is understandable that large cross-national surveys take time to conduct and are, therefore, outdated when they are published. In some cases, this may pose few problems. However, if one is specifically concerned with current problems and a possiblity of a current shift in achievement values, these data may be less than totally convincing. They cannot and truly do not answer the question of whether the kind of deterioration in achievement we think we see is a function of a shift in cultural values. At a more specific level, they do not reflect whether motivation toward school or schooling parallels a presumed loss in demonstrated achievement.

Along a similar line, the author and his colleagues (Fyans et al., in press) have recently concluded an intensive study of the meaning of

success, failure, and achivement in 33 different cultural groups. While the specific focus was not on school achievement per se, the meaning of education and its relevance to life goals were directly considered. This study was likewise based on a comprehensive cross-national study conducted over a period of time, beginning already in the 1950's and continuing in the present. Specifically, it was based on the extensive work of Charles Osgood and his colleagues (Osgood, Suci, & Tannenbaum, 1957; Osgood, Miron, & May, 1975).

For a number of years now, Osgood and his colleagues have been systematically assessing meaning systems across a variety of cultural and linguistic groups. The meaning of over 600 concepts across over 30 cultural/linguistic groups has been summarized in an Atlas of Subjective Meaning. From a number of perspectives, these data present a veritable storehouse of archival data on cultural variation in semantic meaning. Focusing narrowly on the specific interests of this paper, the Atlas contains data on the cross-cultural meaning of success, failure, and a number of other achievement-related concepts. Table 2 contains a listing of cultural/linguistic groups involved in the study and Table 3 contains a listing of the specific concepts employed by Fyans et al. in their analysis of the meaning of achievement across these groups.

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Insert Tables 2 and 3 about here

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The Fyans et al. study asks two basic and complementary questions in relation to the data. A first question relates to possible similarities in the meaning of achievement across the 30 cultural groups. In

reference to the first question, a cross-culturally generalizable factor associated with achievement was uncovered. In other words, there was wide and general recognition of a particular form of achievement. The components of this factor are presented in Table 4 below. Briefly summarized, this factor tends to emphasize work, knowledge, and freedom. It plays down family, tradition and interpersonal concerns. Further, it may be noted that the factor stresses freedom and possibly also initiative and effort. In all, there appears to be something like an achievement ethic which is universally recognized as an identifiable behavioral category. School and work are important components of that ethic, as is the perception of an open system where initiative leads to success. Those who participate in this achievement ethic believe in themselves as an avenue to success and they appear to be distancing themselves from traditional ways as well as from the family and interpersonal ties.

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Insert Table 4 about here

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Having first covered such a cross-cultural factor, Fyans et al. (in press) took the next step and asked: "How do societies found to be high and low in this factor appear to differ in their conceptions of work and achievement?" Examples of cultural/linguistic groups which scored low on this factor were: Mysore-India, Romania, Poland, Black English, and Sweden. Examples of groups which scored high on this factor were: the U.S., (pre-revolutionary) Iran, Afghanistani Pashtung, and West Germany. Groups which scored high on this cross-cultural factor seem to view success in terms of demonstrating independent competence. Those who scored low seem to hold

different goals, including particularly goals associated with retaining social ties and enhancing interpersonal relationships. Following McClelland (1961, 1971, 1978), one might label them in terms of dominating achievement or affiliative needs. For the present purposes, what is particularly interesting is that the United States is found in what here is seen as the highly achievement oriented group. This complements the sketchy evidence in the IEA report that achievement was alive and well in the U.S., several years ago at least.

Belief systems integral to a society are appropriately thought of as determiners of achievement patterns. Yet, it does not seem that the United States is missing something in this regard--unless a drastically significant change in beliefs, ideology and values has occurred within the last couple of years. The available evidence, while at least ten years old, seems to suggest that the U.S. is very definitely an achievement-oriented society, valuing education, science and technology as a means of reaching societal and personal goals. All in all, then, if one is looking for a loss in the "achievement ethic" or for that matter the "work ethic" (cf. for example, Yankelovich, 1982) as a possible cause of lower school achievement, their search may well be in vain.

Social organization and structure. Besides ideology, there are perhaps structural features of the society which may serve to facilitate achieving orientations. Among these, the procedures and processes that must be followed in moving up the socioeconomic ladder may be thought of as especially important (cf., Duncan, Featherman, & Duncan, 1972; Levine, 1966; Ogbu, 1977). On a speculative basis, one might wonder about the trends in our society and how these might affect achievement patterns.

There is no longer a frontier and geographical mobility in the service of finding ever-widening opportunities may also have diminished. Possibly this will have its effects on our society as a whole as well as on our view of education in particular. As yet, we simply do not know. Similarly, it is obvious that we are increasingly becoming a society of older persons. It is reasonably predictable therewith that governmental funding is likely to be directed more and more toward serving older persons. The full effects of this too are unknown, though it is hard to believe that they will be positive as far as educational achievement is concerned. Maehr and Kleiber (1980) have recently speculated on the effects of achieving orientations on younger persons in an aging society. In this regard, they suggest that quick movement up occupational and career ladders may be much more difficult for those who are now beginning their careers than it was in the past. Again, the motivational effects of this can not be satisfactorily determined but they are not likely to be positive.

Perhaps one of the more fascinating recent occurrences in our society is decrease in birth rate and size of family. The so-called "graying of America" is of course not only a product of longevity but also of birth rate. In this regard, recent research on family size and achievement is intriguing. Researchers such as Zajonc (1976; Markus & Zojonc, 1977; Zajonc & Bargh, 1980; Zajonc & Markus, 1975; see also, Felson & Land, 1978) have for a number of years now maintained that decreasing SAT scores were a function of birth rate. When the birth rate was large and increasing achievement patterns tended to decrease. Most recently, as birth rate has decreased, the signs of increase in achievement scores can be noted. The precise mechanisms which connect demography and school achievement are not

readily specifiable. Yet, we might imagine that increased birth rate was accompanied by a situation in which individual children were short-changed educationally. They were part of larger families and were crowded into classrooms that were in many cases ill-prepared to handle them. The time devoted to instructing any given individual child is likely to be a negative function of the number of children there are to instruct. It is possible, then, that the decrease in the birth rate could be followed by a commensurate increase in achievement in the schools.

While demographic shifts may ultimately occasion changes in school achievement, such changes will occur only as these shifts, in fact, lead to greater emphasis on school achievement. There is no necessary reason to assume that the fewer children will automatically command proportionately greater attention. Indeed, there is evidence that as a society we are currently less concerned with the schooling of our children than are other highly developed societies. There is evidence, for example, that education forms a more important part of the life of a Japanese child than the U.S. child. Thus, the typical Japanese child spends more time in school and on school-related tasks than the typical U.S. child (Easley, Note 1). This is possibly also true in other countries such as Russia (cf. for example, Davis, Romberg, Rachlin, & Kantowski, 1979; Keitel, 1982). The research on achievement certainly indicates rather clearly a correlation between time spent attending to a task and achieving (Rosenshine & Berliner, 1978). There may, of course, be an optimal time and mere enforced exposure to materials is not desirable (cf., Maehr & Willig, 1982). However, there is reason to believe that benefit could be derived by lengthening the school day, the school year and by encouraging extra-school academically related activities (e.g.,

homework, computer clubs, science clubs, nature hikes, etc.). One might therewith wonder about the wisdom of a three-month summer vacation--an appropriate enough policy for a rural society in which children play a significant role in the economy--but appropriate in an industrial society where children find little place in the economic scheme of things? Rather than feeding large amounts of money into competency based testing schemes, new curriculum materials, or what have you, it may be valuable to consider directing whatever resources are available to the development of mechanisms which essentially lengthen the time of exposure to educational materials.

What Causes Motivation: An Interpretive Summary

The literature review presented in the previous section of this paper should at least provide an overview of the variety of factors that may affect motivation and achievement in school and beyond. While this review may reflect the variety and richness of the data, it may also present a less than coherent picture of motivation and achievement. To counteract that possibility it may prove helpful to provide an interpretive summary of what we may have learned from all this research. We do so in terms of a theoretical framework outlined by the author elsewhere (cf., Maehr, in press-a, in press-b; Maehr & Braskamp, Note 6; cf. also, Klinger, 1977).

The review of the literature has indicated the following:

1) Certain situations tend to affect motivation; variation in classroom conditions has its effects.

2) Certain individuals are more or less likely to exhibit motivation to achieve, regardless of situations.

3) Broad social and cultural factors define achievement possiblities and orientations.

One might add to this list what should have been implied throughout, namely that these factors interact with each other. For example, individuals who hold certain motivational orientations are likely to respond better to one rather than another situation (cf., e.g., Atkinson & Feather, 1966; Atkinson & Raynor, 1974; Hunt, 1971; Miller, 1981).

Keeping these factors in mind, one may view the various possible causes of motivation and personal investment as revolving around three basic perspectives that the student may hold: action possibilities, sense of self, and goals. Figure 2 suggests the overall scheme envisioned. However, a word or two about each of these and the conditions that affect them is necessary.

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Insert Figure 2 about here

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Action Possibilities

The term "action possibilities" refers to the behavioral alternatives or options that a person perceives to be available to him or her in any given situation. One will act in terms of what is perceived as possible. It is not likely that computer programming skills will evolve where there are no computers or any opportunity to use them. But besides what is perceived to be available in one's world, there is a parallel perception of what is appropriate to do in terms of social and cultural norms that exist for the individual. Playing with computers is not truly a realistic option for many students in the U.S.--even though they have seen one and even though they know a bit about its properties. Playing with computers may simply not be the thing to do. That is, it is not behavior

that is encouraged and rewarded by one's reference groups. It is something done by others, in other groups and contexts and is, therefore, alien to one's identity. In order to entice such a person into becoming interested in the micr chip world one would have to provide more than simple instruction in the existence of microprocessors. Inspite of extensive information about computers, their uses, careers in computer science etc., the student may still develop no interest--particularly if computers are not really an inherent part of his cultural world. It is of interest in this regard that computer clubs and camps are largely populated by boys (cf., Lepper, Note 7). One might surmise also that minority group members are underrepresented among groups revolving around the use of computers--except perhaps in the case of the increasingly popular computer games.

This all may be fairly obvious, yet it is well to recognize that it is an absolutely critical facet of the motivational process. When wondering why a person does or does not do something, one has to consider first whether that something is in fact a part of his or her world. Opportunity is the sine qua non. In some ways, this is most clearly evident in the case of those who become elite performers. In this regard, the research of Bloom (1982a; 1982b) provides a very interesting example. As noted earlier, Bloom and his colleagures have been studying world class performers in five areas: (1) athletics [tennis players, swimmers], (2) musicians [pianists], (3) mathematicians, (4) artists [sculptors], and (5) neuroscientists. One of the many interesting findings of this most fascinating study relates to the point presently at issue. These performers, in an important sense, were born into the "right families." The families valued the particular activity involved. They promoted and rewarded it. They made it not only a viable, but a salient option. They

also knew how to facilitate achievement in this activity. Not that this alone was sufficient, since not all children in a particular family would eventually develop their talent to the same degree as the one who actually became the elite performer; yet, the opportunity had to be there.

All in all, one cannot really say much that is definitive about choice and direction in behavior unless one knows something about the possibilities from which such choices are made. Choosing to go to college, may be a real choice among alternatives--and this represents motivation for one. For another, it may represent no choice at all and be of questionable value as an indicator of motivation.

Sense of Self

Given certain action possibilities, what determines the precise course the person will take? As indicated earlier, recent research on motivation and achievement has moved away from a notion that a general motive or motivational orientation is at the source of achievement behavior. In particular, the emphasis is not on internalized needs, drives or minimally conscious processes. Rather, the emphasis is increasingly being placed on judgments that the individual makes about him or herself in relationship to the perceived situation. Whether or not a student will exhibit the choices, persistence etc. that lead us to say that s/he is "really motivated" is significantly associated with certain perceptions of self in relationship to the situation. Sorting through the literature, it is possible to designate four components of self-hood that figure prominently in motivation: (1) self-identity, (2) perceived autonomy and responsibility for the self, (3) sense of direction and (4) sense of competence. A brief word about each of these and their roles in determining achievement may be helpful.

1) Identity. By identity is meant that the individual perceives him- or herself to be associated with certain groups and holds selected others to be significant. Self-evidently, the effects of social expectations discussed earlier are significantly dependent on whether or not the individual recognizes the expectations as appropriate to himself or herself. Moreover, self-identity affects knowledge about and acceptance of certain purposes and goals. But self-identity not only serves to define what is worth striving for, it also defines how striving should occur. The point is that socially normative expectations derive from one's identity, they are a direct function of one's definition of self as a member of a particular social or cultural group.

2) Autonomy/Responsibility. The second facet of self-hood deals with the perceived origin of an act. Does the individual initiate it? Is it prompted by other persons, things or events? Does the individual see him or herself as an origin or as a pawn in a particular course of action? As a general rule, the perception that one truly plays a causal role in the outcome of an event is a perception that is followed by increased effort. In some ways of greater importance is that this perception is associated with what is judged to be "intrinsic motivation" or independent effort. It ensues quite apart from so-called extrinsic rewards. Indeed, extrinsic rewards appear to militate against the perception that one is an initiator and therefore the use of extrinsic rewards often subvert intrinsic interests and independent motivation (cf., e.g, Lepper & Greene, 1978).

3) Sense of direction. Sense of direction is a facet of self-hood which is typically implicit in comparisons of persons who vary in motivation to achieve. As defined by Maehr and Braskamp (Note 6), it refers

very specifically to the tendency to set goals and organize one's behavior accordingly. In an important sense, the person has a sense that she is becoming something rather than just being something (cf., Allport, 1955). As such, the category encompasses such critical components of achievement over the long term as ability to delay gratification (cf., Mischel, 1974).

4) Sense of competence. By sense of competence, I refer more specifically to a subjective judgment a person might make about his or her ability to perform effectively. It is, simply put, the judgment that one can do something or that one cannot. This judgment varies in degree and extent. Thus, it may be limited to one particular area or generalized broadly across a variety of performance domains. Some will view themselves as more, some as less, competent in regard to a specific domain--or in general. In any event, we are referring to a subjective judgment a person is likely to make about his or her ability to succeed at a task if he or she tries. It is noteworthy that this component of self is probably the one most often associated with achievement motivation (cf., Kukla, 1978; Nicholls, in press; Roberts, in press-a, in press-b).

Goals

How perceptions of self will affect motivation and achievement in a particular case depends on the goals that one person might hold. The term goal refers to the motivational focus of the activity: What does the person expect to get out of performing? What is the value of the activity? More concretely, how does a person define "success" and "failure" in the situation? While one might imagine the existence of an infinite number of goals that might exist, four categories of goals seem to be of primary importance in influencing achievement patterns in

school (cf., Maehr, in press-a, in press-b): task, ego, social solidarity, and extrinsic rewards. A brief word about each of these goals and their effects on classroom behavior is in order.

The task goal category may be viewed as embracing two somewhat different purposes in performance. First, there is the performance situation described by Csikszentmihalyi (1975; 1978), in which the individual is totally absorbed in a task and where social comparisons of performance are remote or are virtually non-existent. Second, there is the competence motivation situation initially described by White (1959, 1960) and currently the object of considerable research (cf., for example, Harter, 1980, 1982; Harter & Connell, in press). In either case, however, the point is that the focus of the activity is the task. One is absorbed in performance and social concerns are minimally present. One performs the task to obtain what is inherently and intrinsically available in the task itself. Where performance leads, or whether others approve, is of minimal importance.

Ego goals refer to intentions which revolve around doing better than some socially defined standard, especially a standard inherent in the performance of others. Whereas, task-oriented goals are at most self-competitive, ego goals are explicitly socially competitive (cf., Maehr & Sjogren, 1971). Achieving the goal inevitably involves beating someone, doing better than another, winning, being the best. Not surprisingly, one's sense of competence becomes particularly important when ego goals are salient.

Social solidarity goals are not always thought of, strictly speaking, as achievement goals. Yet, any serious consideration of achievement in the classroom can hardly ignore the fact that pleasing significant others

is apparently a critical factor in many instances. Thus, in interaction with a teacher, the student may wish to demonstrate that he or she has good intentions, means well, tries hard, and in this sense is a good boy or girl. When one holds a social solidarity goal, faithfulness is more important than doing the task for its own sake; faithfulness is more important than doing the task to show that one is better than someone else. Clearly, demonstrating good intentions is an acceptable means of gaining social approval, not only in various stations in life, but most specifically in the classroom. It is that means of gaining social approval that is especially designated by the category, social solidarity.

Extrinsic rewards refer to a class of goals that are often designated or associated with earning money, a prize, or some other desideratum, not, strictly speaking, inherent in the performance of the task itself. Presumably, such rewards are, in fact, alien to the task in an important sense. More importantly, they are alien to the individual's personal reasons for performing the task. One might suggest that it is more appropriate to view these goals not as ends in themselves but rather as means to other ends. They are sub-goals, if you will, the attaining of which facilitates reaching other personal and more intrinsic goals. In any event, recent work on the social psychology of extrinsic/intrinsic motivation (Deci, 1975, 1980; Harter, 1980; Lepper & Greene, 1978) has made it quite clear that any comprehensive understanding of achievement must consider the role that external rewards play in controlling achievement, not only in the world of work, but also in school.

It is easy to surmise how the existence of these goals modifies behavior. It is also evident that one's sense of self is integrally tied

to the goals which s/ne brings to a situation or the way s/he might respond to any goals implicit in the structure of the task. Thus, there are those who seem to be motivated when they can demonstrate that they are better than others. And, there are those who "freeze" when they are in a competitive situation. Recently, Nicholls (1979) has argued persuasively that classrooms should endeavor to create a task goal orientation. Under these conditions, optimum classroom motivation is most likely to be created.

Conditions Affecting Action Possibilities, Self-judgments, and Goals

While certain action possibilities, sense of self and goals may be viewed as mediating factors most directly responsible for determining motivation and personal investment, the question is inevitable: What factors or events are antecedent to such perceptions? How does the individual come to view himself/herself and a specific situation in a way that he/she will invest his/her best efforts there?

In broad outline, one may think of meaning and personal investment as having their source in the dual factors of situation and person and in a complex of person/situation interactions. Such designation is sufficient for certain purposes. In considering instructional contexts, the outline of factors presented in Figure 3 may have greater utility. Figure 3 outlines four antecedent categories: task design, personal experience, instruction, and sociocultural context. Additionally, it may be suggested that underlying the effects of all other factors, are developmental/maturational factors. In particular, it seems evident that cognitive development would play a major role in modifying the function of these factors. Suggested more directly by the figure is the proposition that

different external factors are likely to affect the various components of meaning differentially. Thus, previous learning and personal experience is likely to have a major impact on one's sense of self, whereas instructional programs and the broader sociocultural milieu of which the student is a part would be especially important in defining action possibilities. For example, as the teacher stresses learning for learning sake (cf., Nicholls, 1979), competition (cf., Ames, 1978, 1981; Ames, Ames, & Felker, 1977; Hill, 1980), or interpersonal relationships the students are likely to hold quite different goals for performance in this situation. In the case where the teacher makes the learning experience a matter of winning or losing, there are of course important different effects in the case of persons who vary in their sense of competence.

While one may surmise that external factors may be differentially important in this way, the fact of the matter is that it is difficult to separate cause and effect so simply. Motivation is complex and multi-determined. It is regularly a product of a combination of factors, hopefully, that too is evident not only in Figure 2 but also in all that has been said throughout this paper.

Toward Excellence in Schooling: Some Conclusions Relevant to the Present and Future State of U.S. Education

The previous review and interpretation of the literature suggests what we now know about motivation and school achievement. It also suggests areas of concern relevant to the quality of education in the U.S. and, where possible, considers whether other societies present attractive alternatives. In this final section of the paper the purpose is to identify certain valid conclusions that may be useful for those comtemplating policy changes designed to improve schooling in the U.S..

First, it is well to re-state a point made at the outset: It should not be assumed that public education in the U.S. has failed or that school achievement has suffered irreversible decline. The evidence suggests a more considered judgment and hesitation in concluding that somehow the system has gone awry. Similarly, it cannot and should not be concluded that today's student has somehow lost the will to learn, to excell and to achieve. Indeed, the limited evidence that is available indicates rather that, compared to other climes and times, the achievement ethic is alive and well in the U.S. However, this is not in any sense meant to suggest that improvement is impossible. It is in no sense a time to be smug about the status of schooling in the U.S. Improvements can be made! Admittedly, motivation theory and research does not characteristically speak directly and unequivocally to issues of policy. Yet, it does imply action that may be taken relevant to the development of effective educational policy. Several possibilities come readily to the fore.

1) <u>If students are to direct themselves toward school achievement, school achievement must be seen as important. If students are to be enticed into intellectual activities, such activities must be perceived as a lively option in their lives</u>.

It is possible that in stressing the needs of all children, we have not effectively communicated the value of academic excellence. In any event, certainly one way of symbolizing the importance of academic excellence is to set aside resources for cultivating it. Another way is to put it on display. The underfunding of programs for so-called "gifted students" and the reduction of activities which stress outstanding intellectual and cultural achievements may be communicating an unintended message regarding the value of academic excellence.

2) A quick solution to communicating the value of excellence is often thought to be a program which stresses a "return to the basics." This is by no means an all-purpose solution.

One cannot reasonably argue against the importance of skill development. However, it may be fairly argued (cf., Maehr, in press a; Stake & Easley, Note 8) that program emphases which focus on basic skills and competencies all too readidly translate into concerns with minimum standards rather than outstanding achievement and creative enterprise. Moreover, if such stress on the basics is accompanied by a stress on external evaluation and authoritarian instructional procedures, important principles of motivation will likely be violated. It is when the student participates fully in the teaching-learning process that the best results will be obtained. Insofar as procedures make the student a "pawn" in the instructional process, one reduces not only motivation but likely also creative and continuing achievement.

3) Establishing standards through state and national examination procedures has a bright--and a dark--side.

Certainly, the establishment of comprehensive examination procedures can serve to emphasize that achievement in school is truly valued. However, such procedures are also problematic. They can make teachers and students captives of tests and standards of limited and questionable relevance. Not only could this limit creativity in the teaching-learning process, it could also limit initiative and have generally negative effects on motivation. Thus, it would indeed seem unwise to push strongly at this point for any type of national examination program--even if it were possible to establish such. One cannot conclude that

societies which sponsor national examinations have thereby enhanced achievement. The possible (!) positive experience of Japan should be considered in the light of numerous other societies where national examinations also play a major role but where achievement patterns are probably not an acceptable model for us. More realistically, it is well to consider the effectiveness of the varied state-wide programs that have been inaugurated in recent years. I am personally very positively disposed towards the state-wide testing program inaugurated in Illinois, not only because of my small role in this regard but also because this program seemingly manages to promote standards without reducing local initiative.

4) Consideration should be given to increasing the time devoted to learning through structural changes in new programs.

With the cutback in educational funding in recent years, there has been a decrease in formally sponsored school-related activities. Apparently students in countries such as Japan and Russia spend considerably more formally sponsored time in educational or quasi-educational activities than do U.S. students. The U.S. school day is short, summer vacation is long, reflecting more the needs of a rural past than parenting and teaching concerns of the present. Perhaps educational opportunities are not as fully available and alive for students in the U.S. as we assume they are. In any event, it seems clear that time allotted for educational activities needs serious examination.

5) Throughout this review, one central motivational principle has been pervasive: other things being equal, sense of participation enhances motivation.

The more one is made to feel like a pawn, the less one will be motivated on a continuing basis. Certain performance appraisal procedures,

teaching styles, and management practices can all serve to create the pawn feeling that reduces the independent striving for excellence. Possibly, this principle can be generalized broadly across a variety of domains and persons which impinge on or participate in the educational process. Among these, I will single out three for comment. Comment too brief to be anything but provocative of further exploration, discussion and study.

a) Parental involvement. It is by no means unusual to mention parental involvement as a significant factor in enhancing school achievement. There are many facets to this matter, of course. Here I wish merely to suggest the possibility that as participation may be motivating for children so may it also be for parents. Thus, one motivates the parent to play an important role in the teaching-learning p ocess as one arranges for situations which encourage parental participation and involvement. Once motivated, of course, a plan of e: ctive action must be made available. Perhaps coordinate home-school teaching through computers provides an option for some. Doubtless available parent-teaching programs need to be employed more fully and new ones developed. In any event, significant attention must be given to the parental role in the educational process. In this paper, the focus is on motivation. The immediate point relates to motivating parents to become involved; the suggestion is that parents, like children, are motivated to b ome involved when they can indeed have an effect (cf., Maehr, Hartman, & Bartz, in press).

b) Educational management styles. Educational management styles vary in the degree to which those who are most directly responsible for

instruction are free to determine the process. As deCharms (1976) quickly learned in his attempt to enhance the motivation of school children, one has to start with the teachers. Teachers who feel like pawns are not motivated teachers and probably cannot motivate students either. As we examine and re-examine management styles which facilitate productivity in industry (cf., for example, Ouchi, 1981) we do well to apply our lessons to educational organizations.

c) Choice of educational services. If choice and participation is as important as suggested throughout this paper, would we not do well to expand the choice opportunities for obtaining educational services? Again, there are many facets to this but consider one: the centrally controlled assignments of students to schools and to teachers. Efficiency, equity and a few other important factors demand some degree of this to be sure, but have we really pushed as far as we can to give parents and students a choice? Perhaps magnet school concepts need to be enhanced in nature and scope and expanded in use.

This paper has not only presented a general review of motivational factors that are important in school achievement, it also suggests perspectives for examining current practices and policies. Perhaps, even more important, it may have yielded an idea or two which could be worth testing in the educational marketplace. In any event, I conclude on a note of optimism. Considering the present state of U.S. schools there is potential for improvement amidst a situation which is by no means hopelessly impossible. Certainly, there is every reason to believe that the will to learn, to achieve, to excell, is very much present among students, teachers and parents in the U.S. today. In short, there is

much to build on in enhancing the current state of affairs. Hopefully, some motivation principles that may be helpful in this regard may be set forth in this paper in a manner that may prove useful to those who must determine policy.

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Table 1

Basic Patterns Followed in the Study of Achievement Motivation

1.	PERSONALITY (SITUATION) ⟶ ACHIEVEMENT BEHAVIOR
2.	PERSONALITY ⟷ SITUATION ⟶ ACHIEVEMENT BEHAVIOR
3.	SITUATION (PERSONALITY) ⟶ ACHIEVEMENT BEHAVIOR
4.	SOCIOCULTURAL CONTEXT ⟶ OPTIONS VALUES, GOALS DEFINITION OF SELF ⟶ ACHIEVEMENT BEHAVIOR

Table 2 *

General Indices and Two-Letter Key for 29 Language/Culture Communities

Key	Location, Language	Site of Collection	Language Family	Geographic
AD	Afghanistan, Dari	Kabul	Indo-European (Iranic)	West Asian
AE	United States, American English	Illinois State	Indo-European (Germanic)	North American
AP	Afghanistan, Pashto	Kabul, Kandahar	Indo-European (Iranic)	West Asian
BE	United States, Black English	Trenton, Chicago	Indo-European (Germanic)	North American
BF	Belgium, Flemish	Brussels	Indo-European (Germanic)	West European
CB	Calcutta (India), Bengali	Calcutta	Into-European (Germanic)	South Asian
CS	Costa Rica, Spanish	San Jose, Liberia, C. Quesada	Indo-European (Romance)	Central American
DI	Delhi (India), Hindi	Delhi	Indo-European (Indic)	South Asian
FF	Finland, Finnish	Helsinki	Finno-Ugric	North European
FR	France, French	Paris, Strasbourg	Indo-European (Romance)	West European
GC	Germany (West),	Munster	Indo-European (Germanic)	West European
GK	Greece, Greek	Anthens	Indo-European (Greek)	Mediterranean
HC	Hong Kong, Cantonese	Hong Kong	Sino-Tibetan	East Asian
HU	Hungary, Magyar	Budapest	Finno-Ugric	Central European
IF	Iran, Farsi	Teheran	Indo-European (Iranic)	West Asian
IT	Italy, Italian	Padua	Indo-European (Romance)	Mediterranean
JP	Japan, Japanese	Tokyo	Japanese	East Asian
LA	Lebanon, Arabic	Beirut	Afro-Asiatic (Semitic)	Mediterranean-West Asian
MK	Mysore (India), Kannada	Mysore City, Bangalore	Dravidian	South Asian
MY	Malaysia, Bahasa	Kelantan State	Malayo-Polynesian	Southeast Asian
MS	Mexico, Spanish	Mexico City	Indo-European (Romance)	North American
ND	Netherlands, Dutch	Amsterdam, Haarlem	Indo-European (Germanic)	West European
PO	Poland, Polish	Warsaw	Indo-European (Slavic)	East European
RR	Romania	Bucharest, Romanian		East European
SW	Sweden, Swedish	Uppsala	Indo-European (Germanic)	North European
TH	Thialand, Thai	Bangkok	Kadai	Southeast Asian
TK	Turkey, Turkish	Istanbul	Altaic	Mediterranean-West Asian
TZ	Chiapas (Mexico), Tzeltal	San Cristobal las Casas	Mayan	North American
TC	Yucatan (Mexico), Spanish (Mayan)	Ticul, Chablekal, Kom Chiem	Indo-European (Romance)	North American
YS	Yugoslavia, Serbo-Croatian	Belgrade	Indo-European (Slavic)	Mediterranean-East European

*Adapted from Osgood et al. (1975).

Table 3

Concepts Chosen to Reflect Achievement Meanings

Self as Cause	Achievement Style		End States	Miscellaneous
A. General self-regard: Myself B. Internality-Externality Taking initiative A choice Refusing Accepting things as they are Free will Luck Fatalism	A. Instrumental Behavior: Education Questioning things Work Illiterate Saving money Lotteries Revolution Playing cards B. Interpersonal style: Cooperation Devotion Respect Sympathy Love Follower Leader Aggressive Competitive Duty Independent talk Servant Master Champion Hero	C. Modernism: Big family Automation Space travel Irradiation Future Present Authority King Time Past Charity Caste Tomorrow Today Yesterday Family Relatives Mother Father Mother Brother Sisters Automobile Middle class Laboratory D. Achievement Situations: Game School Business Examination Play	A. Affective: Success Reward Failure Punishment Shame Pride Defeat Pleasure Fear Pain Sadness B. Abstract Power Progress Development Knowledge Wealth Bravity Freedom Religion God Sin	Courage Need Determination Growing Worker Problem Poor people Rich people Down Up Most people Conflict Hope Servant Sex role Male (gender) Woman Masculinity Girl Man Boy Female (gender) Feminimity

Table 4

Cross-Cultural Factor of Achievement

Concepts	Vector Loading
Knowledge	.92
Progress	.86
Father	.85
Worker	.84
Success	.82
Masculinity	.80
Work	.75
Power	.75
Courage	.73
Cooperation	.73
Freedom	.70

$\hat{\rho}^2 = .7683$

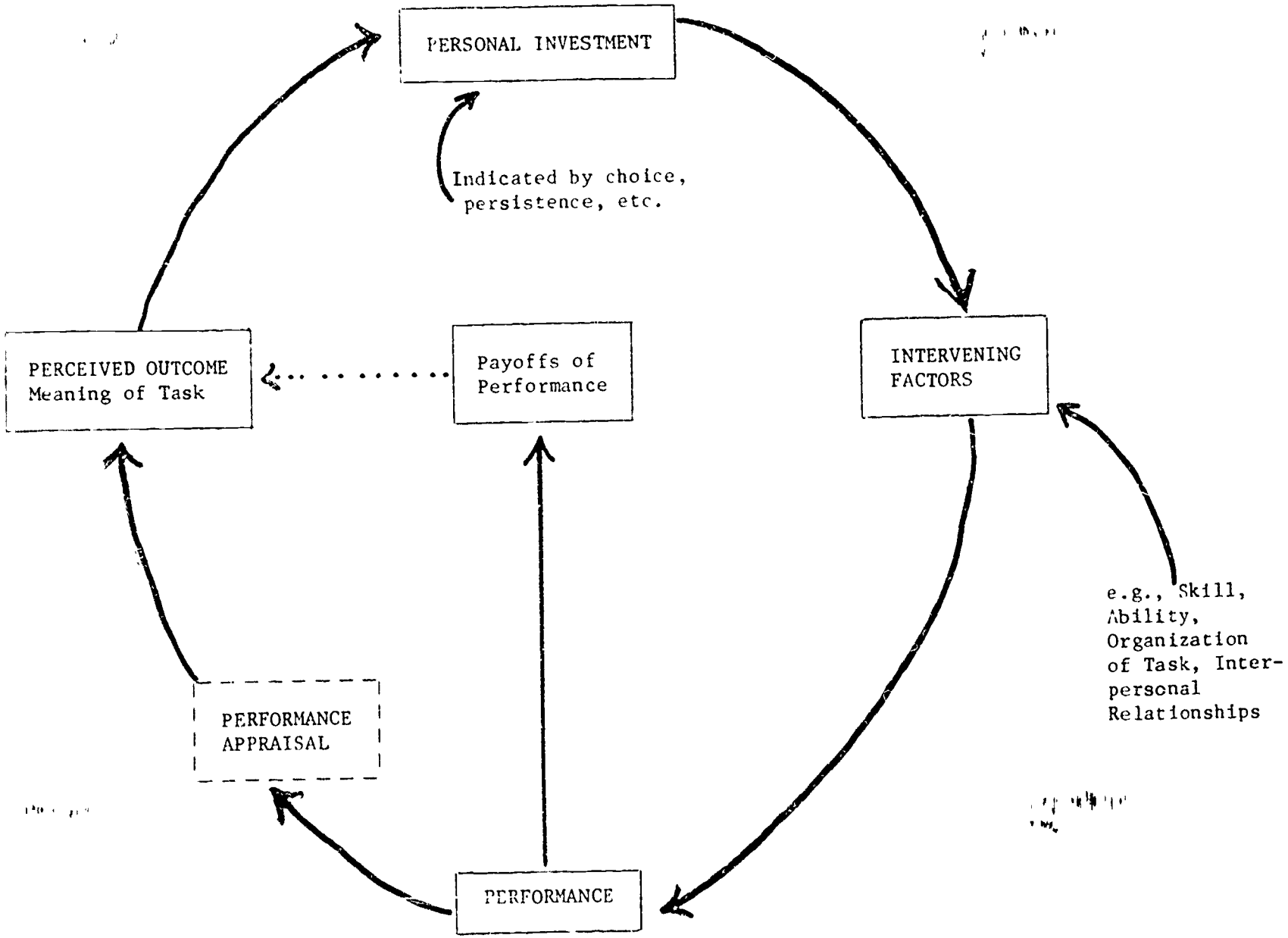
PERSONAL INVESTMENT
Indicated by choice, persistence, etc.
INTERVENING FACTORS
e.g., Skill, Ability, Organization of Task, Interpersonal Relationships
Payoffs of Performance
PERCEIVED OUTCOME Meaning of Task
PERFORMANCE APPRAISAL
PERFORMANCE

Figure 1

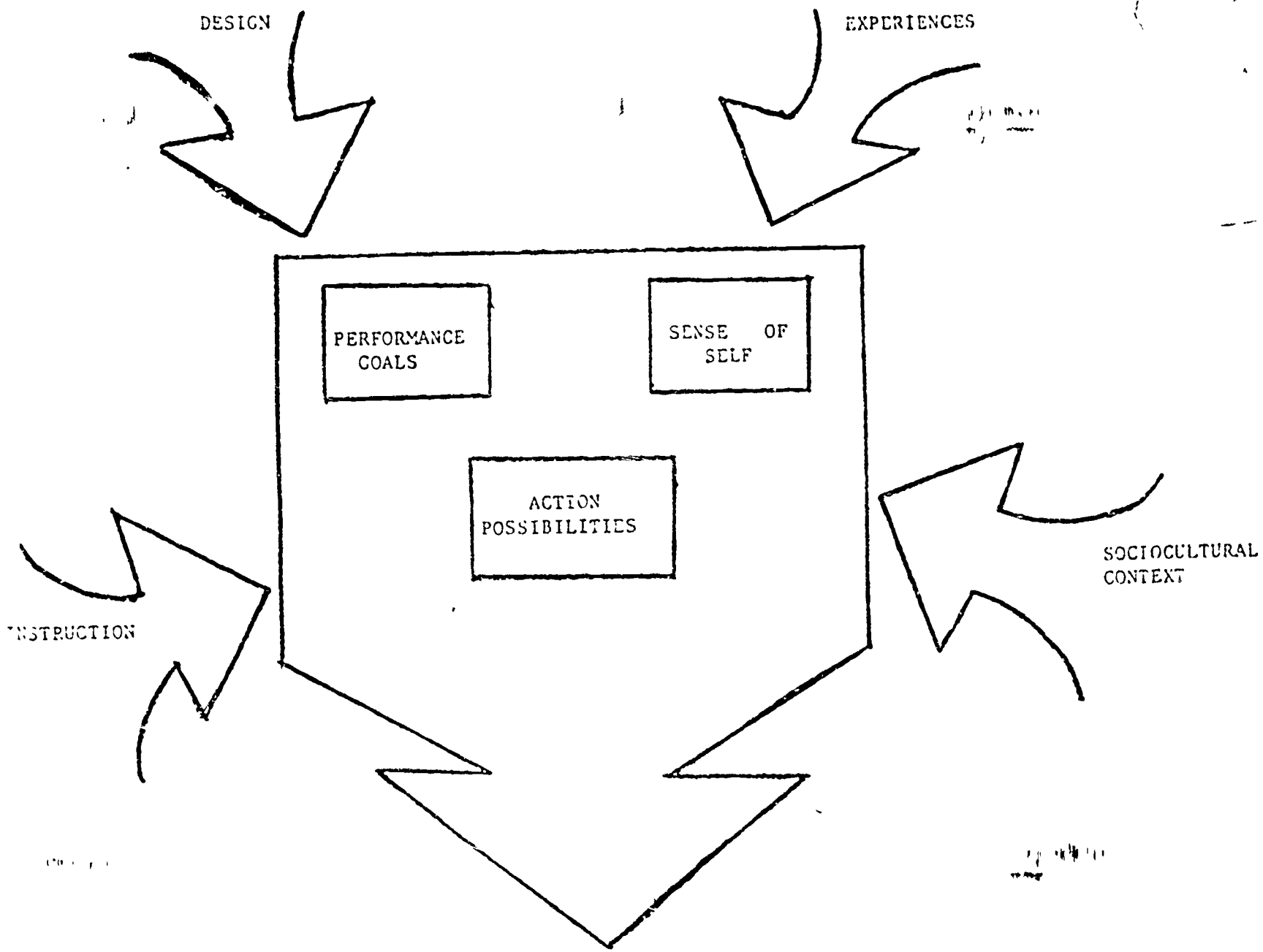

Figure 2

Antecedents of Motivation and Personal Investment