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*Reflections on the Field*

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## **Understanding Motivation and Schooling: Where We've Been, Where We Are, and Where We Need to Go**

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*This paper presents an interpretive summary of the progress that has been made in the study of motivation, especially as this work relates to the area of education. Motivation research has "come of age" with theoretical frameworks rooted in an established body of findings, and with the development of core methodologies for pursuing further knowledge. It has begun to provide a firm base for guiding educational practice. Current work is clearly in accord with mainstream psychology in that cognitive models of motivation are the predominant guides for research. Future work is likely to focus increasingly on how the meaning construction process affects engagement in tasks. Researchers should consider a wider array of research procedures and give greater attention to understanding motivation as it occurs in natural settings, especially as educational interventions are attempted. A serious deficiency in the motivation literature is that relatively little attention has been given to differences related to sociocultural backgrounds.*

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**KEY WORDS:** motivation; education; educational psychology; individual differences.

### **INTRODUCTION**

From time to time, it is appropriate to take note of "where we've been," see "where we are," and project "where we need to go." It is also presumptuous to do so, an act bordering on hubris. At best, areas can be

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identified where there is a lack of knowledge. With some risk, promising research paths to follow can be identified, but it is likely that what now seems pedestrian might later prove to be a paradigm breaker. Certainly, few psychologists have the crystal ball that projects the future; there are only readable “tea leaves” in the journals and books that are available. Even the past, as the postmodernists repeatedly reiterate, is hardly revealed in a fully “objective” manner. History is a very personal and imperfect construction by the authors. Be that as it may, we have been asked to make comments stemming from our understanding of motivation and schooling. We explore motivation as it applies to schooling both historically and in the present, beginning with an examination of how motivation is defined and why it is important to study. The history of the measurement and conceptualization of motivation is discussed, with an emphasis on recent developments. Finally, recognizing the hazards involved, our comments might be viewed as either a set of heuristics or hypotheses, or as a personal story, whichever matches the preferred epistemology of the reader. Our views might be entertaining. They might also suggest a path to follow—or to avoid—in the future. We hope that the reader will find a bit of all of these.

#### **WHAT IS “MOTIVATION” AND WHY SHOULD PSYCHOLOGISTS STUDY IT?**

One thing that is most certain about the past as well as the future is the importance of motivation in the practice of education. Therewith, it should be an important area for educational research. Sitting in classrooms, talking regularly to teachers and principals, and listening to students should make it clear to almost any educational psychologist that something like “motivation” has been, is, and probably always will be at the heart of teaching and learning. The kindergartner, who is so invested in learning to read and write, too quickly becomes the desultory 10-year old who avoids reading and hates math. Arguably, former Secretary of Education, Terrel Bell, had it right when he was quoted as saying: “There are three things to remember about education. The first is motivation. The second one is motivation. The third one is motivation” (Ames, 1990).

So, motivation, properly understood, is probably one of those enduring issues that needs to be confronted again, again, and again. “Properly understood” is the critical phrase. Before one can judge the importance of motivation, comment on its endurance as an issue of importance, or even discuss it, one has to specify what it “is”—particularly because it is a word that is a part of the popular culture as few other psychological concepts are.

### Motivation as “Personal Investment”

We have often found it useful to employ the term “personal investment” (see, for example, Maehr, 1984; Maehr and Braskamp, 1986; Maehr, Midgley, *et al.*, 1996) as an alternative for the term “motivation” for several reasons. First, the word “motivation” is freighted with meanings that are difficult to defend. This is not a problem exclusive to the study of motivation, but a problem nonetheless. The term “personal investment” focuses on certain actions taken by persons, and that is where we believe the study of human motivation must begin as well as end. Perhaps it also reflects a certain perspective on the nature of motivation, the processes involved, as well as its “causes.” The metaphor of investment suggests all persons possess certain resources. In particular, they all have time, a degree of energy, as well as knowledge and skills that they bring to each situation—be it school, the playground, or work. Implicitly, the issue of primary concern is not whether persons in any given case *are* or *are not* motivated. It is assumed that they *are*. The question is when and how do individuals invest time, talent, and energy in a particular activity?

More systematically, investment is reflected in action taken and affect exhibited. Specifically, investment is seen in the *direction, intensity, persistence* and *quality* of what is done and expressed. It can also be noted in the resulting products, although sometimes less immediately and easily (Table I).

#### Direction

Even in the most highly controlled classroom, children vary in the way they invest their time. Some students “choose” to engage in the activity demanded. Others are simply “off task,” and they invest their energies elsewhere. Observed differences in the direction of behavior and the presumed choice among alternative courses of action are primary “facts” of motivational research. In addition to the multiple studies of observed choices of tasks, there are even more studies of simulated choice in which researchers rely on verbal statements regarding what individuals would do, what they like to do, and what they perceive as important to do. These are all statements that can be associated with following a given course of action, or making a choice between options (e.g., Fyans and Maehr, 1978). Even a quick review of the literature reveals that most of the research on human motivation (especially prior to the last decade or so) was really concerned with directional issues: predicting and explaining why individuals pursued one rather than other alternative action possibilities (e.g., Atkinson and Feather, 1966; Atkinson and Raynor, 1974; Maehr and Sjogren, 1971). Of

Table 1. Dimensions of Personal Investment<sup>a</sup>

Dimension	Variables	Examples
Direction	Choice/preference	Mary, a third-grader, comes home from school and "chooses" to watch TV rather than do homework, practice the piano, or play with a friend.
	Persistence	Frank, age 10, spends 5 minutes on an English assignment at 7:00 p.m., at which point he goes to the basement and works on the model car he is building. He has to be "dragged" to bed at 10:00 p.m.
	Continuing motivation	Mike, a fourth-grader, picks out a book during his class' biweekly library session. He brings it back to his classroom, begins reading it, puts it aside upon his teacher's request to work on math—but brings it home and, as his mother puts it, "couldn't put it down."
Intensity	Number of items attempted/problems solved	Peter was introduced to magic markers during the morning kindergarten session. Within 20 minutes he managed to turn out ten separate pictures.
	Activity level observed	Angie was sent upstairs to do her homework. She lay on the bed with her book for 20 minutes, mostly gazing up at the ceiling, finally falling asleep.
Quality	Strategic learning	A 10th grade class was told that they would have to write an essay on a "famous scientist." Within a day, Bill asked the teacher for possible references, took advantage of a library period to quickly survey a few references. Later he checked out several books, began reading and started writing his paper a week before it was due.

On the day before the assignment, Joe called the library for help, got multiple references and books, reading each through from cover to cover. But by 7:00 p.m. the night before the assignment was due he had not come across sufficient information to write the essay. Desperately, he called his brother at college and asked if he had any old essays he could “use for a guide.”

Thoughtful learning

Mr. Jones’ 5th grade science class is expected to do individual projects each year. Liz checks with her older sister who had the same assignment 2 years earlier and basically gathers the same types of seeds, mounts them on poster board and labels them, much as her sister had.

After the teacher introduced a unit on electricity, Jane was intrigued with how water could generate electrical power. She began building a water wheel and got help from her father on crafting a generator. The whole project turned out to be too cumbersome to bring to school. But Jane did manage to build a water wheel that eventuated in the generation of electricity.

Academic venturesomeness

Walt was a junior in engineering when he realized he had taken mostly math and physics courses. The world of the humanities was a strange world. One semester, he decided he would enroll in a course “Persian Language and Literature” to see what it was like—to heck with his GPA!

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<sup>a</sup>Adapted from Maehr, *et al.* (1996).

course, choices made and direction of action taken remain major indicators of motivation (e.g., Cordova, 1993).

### **Intensity**

Motivation research has not only been concerned with the choices made but also with the intensity of actions taken, usually operationalized by measuring activity level, such as number of tasks attempted or completed. The desultory way in which a child works through an arithmetic work sheet contrasts sharply with the quick, repeated, and “energized” action exhibited in an interactive computer game. So, on the face, there is something especially attractive about using intensity as a primary indicator of motivation. Yet, it has in fact proved to be somewhat problematic and therefore not widely employed in research on motivation and classroom learning. One reason for this is that intensity is apparently strongly associated with physiological factors (fatigue, illness, drugs, etc.) that present a dimension that is not easily incorporated within the study of motivation for schooling *per se*.

### **Persistence**

Persistence, typically operationalized as the number of items attempted or the time spent engaged in an activity, is a third and commonly employed indicator of motivation (e.g., Elliot and Harackiewicz, 1996). Educators are not only interested in whether individuals choose to do something but also whether they persist in this choice. When a kindergartner elects to work on the computer during an afternoon activity-choice period, that is interesting. It is also interesting how long she remains engaged in the activity, a primary index of “persistence.” Equally, perhaps even more interesting, is the observation that this child repeatedly returns to the computer each time she is given a chance. This and similar observations have been taken as indicators of “continuing motivation,” a motivational observation that is thought to be especially important because it may indicate an extended investment in learning which is needed if schooling is to have its desired effects (Hoffman, 1992; Hughes, Sullivan, and Mosley, 1985; Maehr, 1976; Pascarella, Walberg, Junker, and Haertel, 1981).

### **Quality**

Educators are not only interested in whether or not students choose to engage in a task or for how long they persist. They are equally, if not

even more interested in the quality of the investment observed (Ames and Ames, 1984), especially in higher or lower levels of cognitive engagement. In the last decade or so, quality has become a major focus of motivational research. Researchers have focused on several types of “qualitative” variables including, first of all, academic venturesomeness: students choosing or rejecting challenging tasks, or attempting or avoiding tasks where they are unsure of their competence (Clifford, 1988; Maehr, 1983). Considerable attention has been given to the study of strategic approaches to learning (Pintrich and De Groot, 1990a,b; Pintrich and Garcia, 1991; 1994), as well as to students’ thoughtful, critical, and creative engagement while investing in an activity (Amabile, 1996; Graham and Golan, 1991; Pintrich, Cross, Kozma, and McKeachie, 1986; Pintrich and Schrauben, 1992).

### Outcomes

The choices people make, the direction their behavior takes, their persistence in any course of action, and the quality of their engagement all add up to different outcomes. Certainly, students do not usually do well on achievement tests or get good grades if they avoid investing in classroom learning activities. Motivational research has hardly avoided performance outcomes, and even the causal factors involved are self-evidently multiple, not just motivational. However, perhaps the major contribution of motivation research is to focus attention on less standard measures of the outcomes of schooling. This change in focus has included concerns with creativity (Amabile and Hennessey, 1992; Amabile, 1996), critical thinking, and conceptual change (Pintrich and Schrauben, 1992; Pintrich, Marx, and Boyle, 1993); adaptive learning strategies (Covington, 1992; Midgley, Arunkumar, and Urdan, 1996), as well as adaptive behavior patterns in general (Kaplan and Maehr, 1997); social development (Juvonen and Nishina, in press) and self-esteem (Arroyo and Zigler, 1995; Arunkumar and Maehr, 1997). Moreover, researchers have extended beyond immediate learning outcomes to consider more broadly the development of “life-long learners,” focusing not only on what knowledge and skills may be acquired at one point in time, but also on factors that enhance an enduring investment in learning (Maehr *et al.*, 1996).

### Motivation as a Sine Qua Non for Learning

So, why study motivation? Anecdotes and the statement of experts aside, the answer seems self-evident when one notes what motivation researchers study: the *choices* that people make among things to do, the *per-*

*sistence* in those choices, the *quality* of behavior exhibited as they engage, and so forth. Such investment not only initiates but shapes the acquisition of skills and the construction of knowledge. So, motivation is indeed the *sine qua non* for learning. It is at the heart of what schools are about.

### AN INTERPRETIVE SUMMARY OF "WHERE WE'VE BEEN"<sup>3</sup>

Human beings have always been interested in "motivational issues." One only needs to read Augustine, Plutarch, or even Shakespeare to get a sense of this. Indeed, the appeal of literature which persists across historical periods and cultural boundaries may reside in how it personifies motivational issues of wide and enduring significance. Although humans have perhaps always been interested in "motivational questions" and have proposed motivational theories, the systematic study of motivation is of somewhat recent origin.

In his classic *History of Experimental Psychology*, Boring (1950) gave Freud and his followers credit for making motivational issues salient at a time when psychology was not particularly tuned in to the dynamic nature of humans. From his natural science perspective, Freud treated motivation like any other phenomenon in the natural world and, by implication, laid the groundwork for the "scientific" analysis of motivational processes. In addition, Kurt Lewin, Henry Murray, Clark Hull, and Gordon Allport—to mention but a few—were early contributors to motivation research. There was also a second generation of researchers who really established motivation as a worthy topic within psychology, including David McClelland, in particular, followed by Jack Atkinson, Julian Rotter, Albert Bandura, Bernard Weiner, Edward Deci, and many others. Their contributions to the conceptualization of motivation and its causes are still evident. But what have they and their followers wrought? However we answer this, we will err in the eyes of some. What follows is our personal interpretation of a broad and diverse motivation literature, complex in scope, and varied in treatment.

### THE SPECIFICATION AND MEASUREMENT OF MOTIVATION

We have already provided a primary example of what motivation research has accomplished, particularly in the last couple of decades: a specification of objectively observable patterns of action and feelings that are

<sup>3</sup>A more thorough portrayal of the history of the study of motivation, especially in reference to education, can be found elsewhere (e.g., Pintrich and Schunk, 1996; Weiner, 1990).



important and that need to be explained. Aside from the specification of such “dependent variables,” considerable progress has been made in defining the sources of variation. Although Freud argued for a scientific approach to what would now be seen as “motivational issues,” his method did not specify antecedents and consequences in concrete, replicable, and falsifiable terms. That remained, initially at least, largely for American psychologists such as Clark Hull (1943) and his students. They brought rigor and specificity to observations regarding motivational phenomena. Such rigor and specificity for a time had its own price: a lack of attention to the complexity and richness of human motives that historically captured the attention of both thinkers and doers. This limitation was recognized and to a degree countered by David McClelland. An erstwhile student of Hull’s, McClelland brought the “scientific” study of motivation out of the laboratory and into the real world of human action and interaction, while retaining a concern for issues of specification and measurement.

In many ways, McClelland is the father of contemporary studies of motivation. Although he would not see himself as an educational psychologist, his work on achievement motivation laid much of the groundwork for contemporary efforts related to motivation and schooling. That claim to paternity rests on his predilection for specifying antecedents and consequences of motivation in a systematic and objectifiable fashion. He focused attention on variation in human action for which “motivational causes” could and should be sought: for example, students making choices and persisting, leaders accepting or avoiding risky alternatives, and so forth. Much of his work was associated with validating the Thematic Apperception Test (TAT), a measure of motivational processes initially developed by Henry Murray (1938). However one feels about the TAT and its approach to assessment, this work represented a serious attempt to assess the variation in motivational processes. McClelland’s labors laid the groundwork for further developments in measurement technology. The concern with stories that people tell, while tied to older models of psychological processes, might once again hold fascination for qualitative explorations into motivation as “meaning seeking” (Howard, 1991). In any event, McClelland’s work was an important element in making measurement the key part of motivational theory and research that it is today.

Whereas research and theory have changed through the years, a commitment to replicable assessment remains strong. In spite of contemporary epistemological trends to the contrary (Gage, 1996; Gergen, 1994; Rosenau, 1992; Smith, 1994), motivational theorists and researchers for the most part have pursued a course of rigorous variable specification, replicable assessment, and systematic linking of antecedents and consequences. The result of this pursuit is a widely shared understanding regarding what the study

of motivation should embrace, and a large and growing body of evidence. This has also contributed to the application of motivation theory to the area of education as well as to other spheres of life.

### THE CONCEPTUALIZATION OF MOTIVATION

Although commitment to specification and measurement might be a necessary step, it is not sufficient for the emergence of a field of study. There is the matter of *what* to measure. Researchers can perhaps proceed for awhile by designating certain interesting behavioral patterns, such as choice and persistence, without establishing a coherent conceptual framework. Colleagues we have worked with in a number of schools are very astute at pointing out variations in the investment patterns of the students in their charge. Teachers can accurately describe what students do or avoid doing. But teachers would be at a loss to make sense of their observations without a conceptualization of the sources of such variation; a conceptualization that can be tested by practitioners and researcher alike. Indeed, without a theoretical framework, crude though it may be, we have little basis for a shared conversation on why anyone does or does not invest in any particular activity (e.g. Maehr, 1983; Maehr, Midgley, *et al.*, 1996).

One of the most important developments in the study of motivation since Freud has been the attention devoted to theory that can be operationalized, tested, and put to work, even in the very complex world of schools. In an attempt to summarize what has happened in this regard, especially related to motivation and schooling, we first describe three paradigms for conducting research that are differentially useful. In our view, the utility of these paradigms varies according to purpose, including most specifically, purposes involving educational applications. Second, we designate shifts in construct preferences through the years, which have strong implications not only for how psychologists do research, but also for how practical that research is likely to be.

### THREE GUIDING RESEARCH PARADIGMS

Three primary structural paradigms dominate motivational theory (see Table II). It is foolish to assert absolutely that one or the other is more or less worthy in making contributions to the fuller understanding of motivation and achievement. Each has its place in the study of motivational processes.

**Table II.** Three Paradigms Commonly Employed in the Study of Motivation

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Individual difference paradigm: I <sup>a</sup> ----(s)--->Motivation Behavior
Situational variation paradigm: S--->(i)--->Motivation Behavior
Interaction paradigm: I × S--->Motivation Behavior

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<sup>a</sup>I = "individual" difference variables; S = situational/contextual variables.

Not unlike scholars in other areas of human behavior and experience, the motivational researcher at the outset confronts a strategic question in the pursuit of causes. Should one focus on something about the *individual* that leads to certain investment patterns or on the *context* and/or situation? Is motivation a function of "personality" or the demands of the performance context? These choices are typically associated with different constructions of motivation. Pursuing primarily one or the other is also likely to change how one defines and measures motivational variables. Focus on the individual as the locus of motivation leads to a consideration of socialization history as a determinant. Focus on context suggests a different search for causes: for example, the nature of the task, the availability of rewards and punishments, and social power or influence. Given these distinctions, interventions to change motivation are likely to take quite different forms. If a motivation pattern is a product of socialization history, attention must be given to changing that history. If motivation is a product of a situation, factors in the situation (e.g., the learning task or the structure of the classroom) must be changed (see for example, Maehr, 1974).

Strategy choices made in this regard tend to become embodied in methods employed that tend to bias research toward one focus or emphasis. For example, the TAT arose out of a concern for individual differences in motivational patterns. Similarly, normed inventories and questionnaires typically reinforce a focus on individual differences in motivation. These methodologies tend to yield data that make one think of the individual as differentially motivated rather than the situation as differentially attractive. Experimental or intervention studies put the emphasis on the situation and context. Of course, few wish to consider their focus as solely one or the other. In fact, implicit or explicit use of interaction models is now commonplace (e.g., Eccles and Midgley, 1989).

Although it is useful to designate the structural paradigms reviewed briefly above, such analysis only goes so far. What is of special interest is the construction of the variables that fit into the Person and Situation categories. Here we suggest that three metaphors essentially designate the range of variables and constructs that have been employed in the study of motivation in both the past and present: person as machine, person as decision maker, and person as creator of meaning.

### Person as Machine

Freud and Hull framed their thinking more or less in mechanistic terms. Freud began with instincts, or basic and largely innate needs that had broad implications for social behavior in humans. Hull stayed fairly close to bodily maintenance, working largely on hunger, thirst, and anxiety in rats. Both, however, evoked the picture of a hydraulic machine as they described how basic drives guided, inhibited, or enhanced behavior. Out of their work, and the considerable work of others, there arose something like a need-drive perspective on social behavior. Various social needs-drives presumably derived, at least in part, from experiences surrounding satisfaction of more basic physiological needs. However, it soon became clear that these social needs and the "drives" they precipitated were different in several important respects from biological needs and drives. Social needs were not always easily traced to physiological roots and were not readily described as cyclical in nature. Even in the earliest description of social needs/drives, it is difficult to recognize a hydraulic mechanism as the basis for the described behavior. The term "need" more often refers to an observed direction of behavior than to any identifiable response to deprivation which leads to instrumental behavior. For example, consider the need for achievement. McClelland (1961) traced that "need" to physiologically based affective reactions, but definitely not to hunger and thirst. Need for achievement is perceived as being derived from certain emotional reactions to certain common situations roughly associated with establishing competence ("succeeding" and "failing") with regard to what life presents. The research that actually eventuated from this attribution depended very little on hydraulics and eventually gave rise to another metaphor for motivation: the person as decision maker.

### Person as Decision Maker

Viewing the person as a decision maker was and is a prominent perspective of economics. It became a focal interest in psychology at least as early as the 1950s, paralleling the development of computer technology and the increasing regard for cognitive processes (e.g., Edwards, 1954). Decision-making conceptions of motivation were reflected in McClelland's reconsideration of the Protestant ethic and the entrepreneurial spirit. It was, however, in the work of J. W. Atkinson (e.g., Atkinson and Feather, 1966; Atkinson and Raynor, 1974) that decision making emerged as a major, if not predominant view of achievement motivation. As the "venturesomeness" of the entrepreneur was considered, it was convenient to express this

analytically in terms of moderately risky choices. Not surprisingly, this was quickly applied to motivation for schooling as well (e.g., Maehr and Sjogren, 1971), and ultimately became a major force in the study of motivation (Wigfield, 1994).

Decision making was, and still is, an attractive model if one wishes to deal with complex human behavior. First, it calls attention to the importance of a readily measurable feature of human behavior that “looks like” motivation. Students, for example, can be observed to make career choices. Before that, they invest in or avoid different facets of schooling and attend to school and instruction to varying degrees. Students pay heed to the learning task at hand or wander off in mind and/or body to the playground, their social group, or a more attractive activity. Second, selecting a decision theory model for the study of motivation provides a ready-made framework for pursuing a wide range of interesting and important questions. In any event, for awhile, the study of motivation was essentially the study of the person as decision maker.

There are several characteristics of a decision-making metaphor that played an especially important role in the definition and study of motivation. Choice and the direction of behavior became focal in the definition of motivation. Making motivation a “decision” brought in a particular set of variables that were becoming increasingly important in the social sciences. First, there were alternatives from which to choose. Choice, in turn, presumably followed from a two fold perception of the outcomes that might follow: How desirable or valuable was a certain outcome? How likely was the individual to attain it? Choosing an option was hypothesized to be the product of the value of the outcome multiplied by the probability of success in attaining it. This was played out in different ways in different models. But as it became a feature of motivation theory, increasing stress was placed on the individual as a decision maker. With that, the *expectation* and the *value* of succeeding became critical variables. Hence, the appellation “expectancy  $\times$  value” theories of motivation emerged (e.g., Feather, 1982; Wigfield, 1994).

J. W. Atkinson was responsible in part for the prominence of this metaphor, and for the concerns and questions that arose from it. Curiously, however, his work remained rooted in a dynamic conception of motivation. Rather than focusing primarily on the decision-making process, his work investigated the dynamics within the individual, especially individual differences in the need for achievement that drove this process.<sup>4</sup> Nevertheless,

<sup>4</sup>Actually, the need for achievement was subdivided into two individual difference variables: Hope for Success (assessed by the TAT) and Fear of Failure (assessed by a Test Anxiety Questionnaire), following the approach-avoidance decision-making paradigm.

his work served to put certain cognitive processes at the heart of understanding motivation, including perceptions of self and the situation. By highlighting the importance of thoughts about self and situation, Atkinson's work may have provided the transition to a new metaphor: the person as a creator of meaning.

### Person as Creator of Meaning

Judgments about competence and value have less to do with the person as a reacting mechanism than with a belief that the person is a creator of "meaning." As decision making became the focal issue in motivation, psychology as a whole was returning with a new fervor to the study of cognitive processes and consciousness. First, there was a renewed interest in how concepts of and feelings about one's self figured into how behavior was framed, directed, and motivated (e.g., Wylie, 1974, 1979). "Who we are" and "what we can become" were on the edge of a behavioral psychology, but at the center of a cognitive psychology. Few conceptions held stronger sway in ushering in this new metaphor for motivation than personal and situational *causal attributions*. Bernard Weiner (1985, 1986), a sometime student of Atkinson's, deserves most of the credit for foisting this third metaphor into the discussion and research on motivation.

The personal construction of causality is critical to the creation of meaning. Weiner's contribution was not the designation of that principle but the establishment of it within the realm of motivational and achievement research. For a decade or more, studies of the attributed causes of success and failure poured out not only from Weiner's laboratory but from almost all motivational research centers (Graham, 1991; Weiner, 1994). Although this work laid the basis for much of the current research on motivation and achievement, it was limited in one important respect. It dealt largely with the person's judged capacity to act effectively. Focusing on an individual's ability, attribution theory paid considerably less attention to value, the second critical component of decision-theory models. The concern with attributions, however, figured strongly in a renewed consideration of a close cousin of value: purpose, or the perceptions that individuals hold not only regarding the *causes* for success and failure but the *definition* of success and failure and why one should act to pursue one and avoid the other. For example, school tasks might be viewed as instrumental to getting a grade or a job. They might also be done "just for the fun of it." Certainly, these meanings that individuals hold vis-à-vis the task are also an important factor in explaining human action patterns. At least, that is an assumption

that currently captivates much of the work on motivation and which is loosely incorporated under the label of "goal orientation theory."

Goal orientation theory (for reviews, see, e.g., Ames and Ames, 1989; Anderman and Maehr, 1994; Maehr and Pintrich, 1991; Urdan and Maehr, 1995) emerged in response to questions regarding the generalizability of attributional principles across persons and situations (Maehr and Nicholls, 1980). Women seemed to attribute differently than men. Individuals from different cultures tended to make different attributions or to behave differently when making similar attributions. But perhaps the major impetus for goal orientation theory lay in the renewed interest in cognitive motives in general (White, 1959, 1960) and "intrinsic motivation" in particular (Csikszentmihalyi, 1978; Csikszentmihalyi and Nakamura, 1989; Deci, 1975). In this regard, an especially imaginative study by Lepper, Greene, and Nisbett (1973) made it virtually inevitable that purpose had to be considered as a critical principle in understanding the nature of motivation. In this case, varying definitions of a situation as "work" or "play" were found to change the continuing interest in pursuing a task on one's own initiative. Following that, a range of purposes pursued in the course of learning were also considered, including especially social competition and social approval (see Anderman and Maehr, 1994; Urdan and Maehr, 1995; Wentzel, 1991). But in any event, the purpose promoted, and the goals adopted by individuals in a situation have become a primary focus in trying to understand not only the direction and intensity, but most especially the *quality* of behavior exhibited.

In sum, the contemporary study of motivation and schooling revolves significantly around the personal constructions regarding who one is, what one should strive for, and what one should become. It is therefore fair to say that the *person as creator of meaning* is indeed an appropriate metaphor in characterizing contemporary efforts.

## WHERE WE ARE

A lot has happened since the time of Freud, Hull, and others of that era. We believe that these shifts represent progress, particularly in the study of motivation and schooling. A large body of information is currently available on how to study motivation. With that, researchers have many acceptable options available to them. Perhaps most important of all there is a widely accepted understanding of what motivation is about and what should be studied. There is a shared commitment to presenting verifiable data for the consideration of a community of interested scholars. There is healthy theoretical dialogue to guide research and prompt critique. Scholars are

also becoming serious players in affecting the nature of educational practice. However, a more extended comment regarding this proposed state of affairs is in order.

### **Propadeutics**

Propadeutics is a term employed in the humanities and literature, especially in the study of the classics, that refers to the preliminary skills and knowledge needed for systematic study in an area. It may better reflect what has been achieved in the study of motivation than such words as methods or methodology because more than procedures are involved. In current research on motivation, there is an emerging consensus regarding definitions, questions, and the range of the domain. Researchers have learned how to conceptualize and study motivation in a systematic and rationally defensible fashion, which is subject to public scrutiny and falsifiability. This is evident in the conceptual and definitional work just reviewed, the specification of the domain of motivational inquiry, and a plethora of measurement approaches which currently exist. There is by no means universal and complete agreement regarding how one should conceptualize and index motivational processes; however, there is considerable agreement on what the study of motivation is about. Critical variables have been identified, a wide array of procedures have been made available, and theory has been increasingly stated in explicit and operational language. There is, in short, a place to start when one chooses to study motivation.

### **Theory**

Earlier theories of motivation were largely a product of the "insights" based on very individualized, and often not independently testable experiences. Freud's observations and insights were provocative and helpful in the larger scheme. They were, however, difficult to replicate and apply in a way that was acceptable to a wider community of scholars. The still popular (in some circles) theory of Maslow (1954) was not characterized by the kind of specification, measurement, replicability, and tests of utility that is the norm for today's motivation theorists and researchers. Some theorists might disagree, but almost all serious scholars in the area accede to placing their methods and their results in a public arena that facilitates testing and refinement by others. A shared knowledge community has emerged which, as we will illustrate later, is also beginning to incorporate practitioners as well as researchers.



Aside from these metatheoretical developments, the substance of the dominating theoretical perspectives has shifted dramatically in the last decade or so. For example, it was only a few years ago that reinforcement theory was touted as a theory of choice for researchers and as a fitting guide for practitioners. That could hardly stand today. There are still arguments regarding whether administering extrinsic rewards is always bad in school settings (e.g., Cameron and Pierce, 1994; Eisenberger and Cameron, 1996; Lepper, Keavney, and Drake, 1996; Ryan and Deci, 1996). These battles are, of course, not without their value, but in an important sense, theory has bypassed the issue of intrinsic vs. extrinsic rewards to focus on the meaning that rewards might have. With the increased dominance of a social cognitive perspective, the emphasis is not so much on the external stimulus *per se*, but on how perceptions, mental schemas, and belief systems mediate responses to the stimulus (Maehr, 1989; Maehr and Braskamp, 1986). Although the possibilities here are many, current motivation research is largely concerned with how two different types of schemas frame motivation: thoughts about *self* and thoughts about *purpose*.

The *self-as-perceived* has figured prominently in motivational research for some time. It remains a major part of several different theoretical systems currently of considerable import (e.g., Baumeister, 1995; Harter, 1992, 1993; Markus and Kitayama, 1991; Markus and Nurius, 1986). Views of one's *self*, particularly one's ability and worth, are a salient feature of most cognitive constructions of motivation. Perhaps it is the construct of self-efficacy as employed by Bandura (1993), Schunk (1982, 1991), Zimmerman (1989), Ashton and Webb (1986), among others, that has become particularly integral in the study of motivation and schooling. Work revolving around self-hood in general and self-efficacy in particular remains an active feature of current motivational research.

Of more recent origin is work associated with the definition of *purpose*. Of course, the concept of goals *per se* is not a recent or novel idea. What is new and important in current efforts is the redefinition of a "goal" as a broader purposive orientation associated with the definition of the task to be done. Focal here is the individual's construction of "success" and "failure"—and how this construction conditions not only the direction and intensity but also the quality of personal investment. Current work in this regard revolves primarily around two goals: task and ego,<sup>5</sup> defined briefly in Table III.

<sup>5</sup>Multiple terms are employed in the literature to designate what we here term "task" goals (also referred to as learning or mastery) and "ego" goals (also referred to as ability). For this paper, we adopted terminology that has the most general meaning.

Table III. Definitions of Task and Ego Goals<sup>a</sup>

	Task	Ego
Success defined as...	Improvement, progress, mastery, innovation, creativity	High grades, high performance compared to others, relative achievement on standardized measures, winning at all costs
Value placed on...	Effort, attempting difficult tasks	Avoiding failure
Basis for satisfaction...	Progress, mastery	Being the best; success relative to effort
Work/performance context...	Growth of individual potential; learning	Establishing performance hierarchies
Reasons for effort ...	Intrinsic and personal meaning of activity	Demonstrating one's worth
Evaluation criteria...	Absolute criteria; evidence of progress	Norms; social comparisons
Errors viewed as...	Part of the growth process; informational	Failure; evidence of lack of ability or worth
Competence viewed as...	Developing through effort	Inherited and fixed

<sup>a</sup>This table builds on earlier analysis by Ames and Archer (1988), and in its present form is adapted from Maehr, Midgley, *et al.* (1996).

In the case of a *task goal*, the purpose involves a focus on learning, or progress and improvement in performing a particular task. In the case of *ego goals*, the focus is on the individual, for example, on his or her ability. A primary objective associated with an ego goal orientation is performing better than others and demonstrating one's superior ability. Task, ego, and other goal orientations have characteristically been treated as individual difference variables. However, there is a strong argument for viewing them as a construction that individuals make in a particular context and in response to that context (Ames, 1990; 1992; Ames and Archer, 1988; Maehr, Midgley, *et al.*, 1996). This view of goals has enlivened the study of school environments, and it promises to hold significant implications for educational policy and practice. After all, *group* motivation has to be an issue for teachers with up to thirty children under their tutelage. Forming a theory of group motivation might provide an answer to administrators who ask what they can do to enhance student motivation and learning (see, e.g., Anderman and Maehr, 1994; Maehr, 1991; Maehr, Midgley, and Urdan, 1992; Maehr and Midgley, 1991; Maehr and Parker, 1993).

In sum, important developments have occurred in recent decades that have given motivation theory a new look. The focus has increasingly centered on thoughts as the essential causes or mediators of motivation. The

study of motivation and that of cognition are increasingly intertwined, and this has many implications. It has certainly invigorated motivational research. It may serve to enhance the utility of motivation research in designing practice and informing policy.

## CHANGING POLICY AND PRACTICE

Motivation, perhaps as much as any field of study, has applications to the world of practice. Thus, there are a number of reasons for concluding this characterization of “where we are today” with a summary of the application of motivation theory to practice and the gains from doing so. Given the inclination to use motivation theory almost as soon as it is developed, it is not surprising that there are multiple cases of application and too many to summarize or cite. Instead, we designate three types of applications to illustrate the point.

### Changing Individuals

No sooner had McClelland completed his massive study of *The Achieving Society* than he began to intervene to increase achievement where it was needed. This included working with “underachieving students” (e.g., Alschuler, 1973) as well as with apparently all too stodgy adults assigned management and leadership roles in the business world (Maehr and Braskamp, 1986; McClelland and Winter, 1971). Interventions consisted almost exclusively of solving a parental, societal, or school problem by somehow managing to fix the persons who didn’t match up. Thus, underachieving persons might be brought to special camps or workshops where they would engage in considerable re-thinking of who they were, a reexamination of what they could do, and some direct instruction of what it meant to be an “achiever,” “entrepreneur,” or a “motivated” person. There was also a degree of social bonding in an achieving group that seemed to be an important part of the process. As we have already pointed out, McClelland viewed motivation in individual difference terms which were in large part a product of an individual’s socialization history (Maehr and Braskamp, 1986).

A focus on the individual in motivational interventions was certainly not unique to McClelland or to the time in which it occurred. Children were pulled out of classrooms for special interventions to modify various aspects of their behavior, to make up for presumed deficiencies, and to fix whatever was assumed to be wrong, much as a clinician would work with

a patient or group of patients. So, whether the framework happened to be motivation, a learning disability, or a debilitating concept of self, the focus was on changing the person—in a sense, reversing a socialization history. That focus still exists and is not altogether without merit, as examples of attribution retraining (see e.g., Foersterling, 1985; Borkowski, Weyhing, and Carr, 1988) and self-efficacy enhancement research (e.g., Schunk, 1989) make quite clear. Even in the normal course of a school day, teachers may find the opportunity to work on self-efficacy enhancement or attributional retraining, at least with a select few students. Regular education teachers, a “special education” teacher, or a paraprofessional can effectively provide experiences that change an individual’s sense of self-efficacy in math or some particular subject area, outside the classroom context or in special group settings.

### Changing Contexts

Although the focus on changing individuals has merit, it does not adequately address the challenge of classroom teachers and educational administrators. Teaching occurs in classrooms of twenty or more students. And, administrators worry not only about motivating their teachers, but whether they also have a role in enhancing the motivation of their students (Maehr *et al.*, 1992). In other words, the question within education is virtually inevitable: how do group experiences impact motivation? Although the classic study by deCharms (1976) opened up this question, only recently has the idea of what the educator can do to enhance motivation become an important issue for research. Several lines of inquiry have been pursued in this regard. One line of investigation has focused on educational practices, such as evaluation and assessment (e.g., Covington, 1992; Hill, 1984; Hill and Wigfield, 1984). Special attention has been given to the motivational properties of the learning tasks, and more specifically to what teachers ask students to do (Blumenfeld *et al.*, 1991). Researchers have suggested how practices that become typical and normative in classrooms create a kind of learning climate or culture that affects the direction and quality of the students’ effort and work (e.g., Ames, 1990; Maehr, Midgley, *et al.*, 1996).

Broader issues of policy, beyond instructional practices, are also being addressed by motivational researchers. In their extensive studies of adolescent development, Eccles and Midgley (1989; Midgley, 1993) have demonstrated how schools follow policies and procedures that ignore the developmental needs of the children they serve. Reduced motivation and maladaptive behavior are often the result. Thus at a time when the ado-

lescent is seeking to explore his/her individuality, the school environment is likely to stress external control, reduced freedom and choice, more structured learning experiences, and less openness to individualization of learning. At a time when adolescents can experience emotional turmoil, middle and secondary schools are often less concerned or supportive of their personal and social needs. The way schools are organized often prevents close relationships between students and teachers rather than furthers them. Rules and regulations may exacerbate students' problems of identity as well as their interest in learning (see also Anderman and Maehr, 1994).

### Emergence of a Theory of Schooling

Focusing motivational research on the individual within a context has been the impetus for the development of a philosophy or theory of schooling. The recent work on goal orientations, more specifically on the roles of the individual and context, has proceeded on a path toward the development of a theory of education. This is a theory from which policies and practices are tested and critiqued and school reform is designed. This is evidenced throughout the work of Nicholls (1989) and Ames (1990), as well as others. It has also been a major outcome of a program of research in which the authors have participated (see for example, Maehr, Midgley, *et al.*, 1996). Generalizing from findings that task goals generally have a positive influence and performance goals have a negative influence on student development and learning, specific suggestions for school reform have been proposed and promoted. Specifically, schools should perhaps be organized to foster task and minimize ability goals. Although the emergence of a theory of education is not without precedent, it remains somewhat controversial. The policy proposals stemming from this will be debated for some time to come.

### WHERE WE NEED TO GO

Although important developments in motivation theory, method, and application have occurred, especially in the last decade or so, the area is still changing. Consequently, alterations in theory and method as well as in the application of research are inevitable. In conclusion, we suggest some things that need to change, some things that are likely to change, and, with a good deal of trepidation, the nature and direction of some of these changes.

### Propadeutics

A certain basis has been established regarding how researchers should go about studying motivation. The preliminary business of what is to be studied and some options regarding method and approach have been documented. Psychologists should re-examine procedures heretofore employed and evaluate what these procedures have yielded. Useful as these may have been in establishing the contemporary core body of knowledge, these procedures may have also limited thinking about the nature and nurture of motivation. As motivational research has now "come of age," perhaps it is time to venture forth on new methodological paths.

Those who study motivation and schooling are profoundly indebted to many researchers including, McClelland, Atkinson, and their heirs. Their lines of inquiry remained tied to a specific conception of assessment and a particular instrument, the TAT. Early work with the TAT prompted many if not most of the motivational questions that retain researchers' interest. The instruments and associated procedures were also severely criticized, especially for their inability to achieve a high degree of reliability (e.g., Entwistle, 1972; see also, McClelland, Koestner, and Weinberger, 1989). Partially as a result, these methods are currently not employed extensively. Rather, questionnaires have become the primary method of choice. Although these may appear to solve some of the psychometric problems associated with projective tests, questionnaires also have limitations. Perhaps it was the cognitive revolution that convinced researchers that these more standardized procedures were appropriate, but most likely it was the nature of the theoretical constructs that emerged. In any event, the history of the study of self-concepts and their purposes is littered with questionnaires and inventories employing Likert scales. This development has doubtless contributed significantly to the popularity of motivational constructs within research on a wide variety of topics. However, it may be time to take stock of where questionnaires have, perhaps unwittingly, led us. We offer several observations in this regard (see e.g., Kaplan, 1996; Urdan, in press).

First, inventories and surveys tend to retain the focus on individual differences in motivation. The psychometric methods employed have pushed more for a trait rather than a state conception of motivation. One can ask individuals about a situation, such as their classroom, and relate this to how they view their own motivation and learning. But it is often unclear which particular events and episodes of the classroom students are recalling in their responses. It is often even less clear what about their classroom in fact causes their orientation toward learning. Arguably, the unmitigated pursuit of motivational solutions following a trait approach will not bring the highest practical yield for education. Typically, educators are

interested in knowing more than their students' traits. They want and need to know how they can intervene to enhance motivation and learning. To provide this kind of information, survey methods probably should be complemented by experimental methods, especially methods that take advantage of naturally occurring innovations or interventions: the introduction of experiments in the teaching of science, the reconfiguration of groups for cooperative learning, the choices made during free time, even the conditions that vary when taking tests. Schools and teachers are regularly called upon to introduce something different, and in fact education by its very nature is an intervention. The trick is to be creative about converging the interests of practice with theory. From our perspective, motivational researchers have reflected all too little inclination to pursue field experiments of this kind.

Aside from the recurring state vs. trait issue in the study of motivation, there is a need for enriched assessment. Anyone with half a foot in the world of educational research or in the social sciences generally, is aware of the press to move away from standard psychometrics in attempting to understand educational processes. In this connection, the term "qualitative methods" is often employed as a quick description of a wide range of methods and methodologies. Certainly, the study of motivation has historically exhibited an openness to a variety of approaches, both "quantitative" and "qualitative." Yet, currently qualitative approaches are not employed extensively in the study of motivation. The emerging dominance of a socio-cognitive perspective on motivation initially served to encourage the wider use of standardized assessment and a predilection for laboratory-type experiments along with survey research methods. Admittedly, this kind of research has many benefits. But the time has come to question whether these methods have perhaps biased and limited conceptions of motivation.

Motivational researchers need to probe more deeply, and search more extensively and creatively, into the cognitive processes and emotions that accompany motivational orientations. They need to investigate more deeply than questionnaire methods allow. Researchers especially need to situate this exploration in the contexts that the students (teachers, parents, and others) "naturally" experience. This point of view is increasingly voiced by others, including John Nicholls. Early on, he established groundwork for such efforts and with his students continued to conduct a series of studies that employed Piagetian-like interactive interviews regarding the thoughts, purposes, and theories that children hold toward schooling (Nicholls, *et al.*, 1990; Nicholls and Hazzard, 1993; Nicholls, Nelson and Gleaves, 1995). Other methods include structured interviews (Urdan, Midgley, and Wood, 1995), case studies (Blumenfeld *et al.*, 1991; McCaslin and Murdock, 1991; Meece, 1991), and ethnographic methods (Hoffman, 1992). Additionally,

Pintrich and De Groot (1993) have recently begun to develop a case for combining “narrative” and “paradigmatic” approaches in the study of motivation.

As motivational researchers attempt to understand the experienced world that guides personal investment, a wider variety of evidence employing a broader range of procedures must be considered. Ultimately, standard inventories and surveys may not be the only—and perhaps not even the preferred—procedure of choice.

### Theory

Current motivation theory pays special attention to the perceptions, thoughts, beliefs, and “meanings” people hold. Two meaning systems have been explored extensively: *self* and *purpose*. We expect that efforts in this regard will continue. In terms of the self, concepts of ability and efficacy have dominated, and there is little reason to believe that the accumulation of evidence on the importance of such constructs will be rejected. However, it seems likely that researchers will increasingly attend to the importance of other facets of selfhood. To a degree, this is already evident in the work on the construction of self in “collectivist” and “individualist” societies (e.g., Markus and Kitayama, 1991), in which attention is called to the varying importance of group membership in framing who one is and determining what one does. Perhaps the differences in achievement patterns in the U.S. and certain Eastern cultures may be profitably approached in these terms (cf., Caplan, Whitmore, and Choy, 1992; Maehr and Nicholls, 1980; Salili, 1995; Stevenson and Stigler, 1992). Relevant here also is the work on ethnic identity as it contributes to participation and performance in certain achievement contexts (Phinney, 1996). Thus, earlier work by Ogbu and his collaborators (e.g., Ogbu, 1978, 1982; Fordham and Ogbu, 1986; see also Arroyo and Zigler, 1995) has indicated how ethnic identity could be a factor that contributes to a disidentification with the school. Other work has indicated how one’s awareness of minority group membership in an achievement situation evokes a “stereotype threat” which undermines performance (e.g., Steele and Aronson, 1995). The point is, research on selfhood makes it clear that concepts of competence are not the only aspect of one’s perception of self that make a difference in motivation, learning, and how one relates to schooling (e.g., Baumeister, 1995). Nowhere does this literature seem more valuable than with regard to understanding the achievement across social and cultural groups, an issue which is re-emerging as critical to framing educational policy and practice.



Concepts of *purpose* are likely to remain a component of motivational research. The proliferation of goal variables far beyond the task and ego categories (e.g., Ford and Nicholls, 1991) is both intriguing and troubling because parsimony is not especially served. The nature and function of goals has been stretched and perhaps strained. There is a hint here of what may be an unwitting return to a *need* theory of motivation under a cognitive label (see e.g., Urdan, in press). If so, this is likely to have implications for how goals are defined and studied as well as the functions of goals. Does one have a varying need to pursue a particular goal? Does one experience occasional satiation in the pursuit of a given goal? How situational or how durable are these goals? This approach may expand the range of behaviors that may be considered. However, one possible limitation is that it directs attention away from an important question for education: How does a learning context, such as a classroom, influence the purposes that students adopt? What practices make it more or less likely that thirty or more students will, for example, hold task rather than ego goals?

At least from our perspective, it might be more useful to define goals as cognitive schemas that frame action and feeling rather than as needs. These definitions differ not only in subtle nuances but also in the implied research methodology. Thus viewing a goal as a cognitive schema might suggest a closer tie to current work in cognitive science and might parallel work on attitudes and social perception (see for example, Baldwin, 1992; Fiske, 1995). Such a view is potentially more compatible with an approach to motivation that seriously considers the impact of the context on shaping the affect and action of persons. We believe that there is, on the horizon, the basis for serious dialogue on the nature and function of goals that goes beyond their definition as specific objectives to be reached (compare for example, Locke, in press; Locke and Latham, 1990a,b).

However concepts of self and purpose will change in the future, they will likely have an established place in the motivation literature. There is one area of cognitive life that has been given considerably less attention yet deserves more: action alternatives. By "action alternatives" we mean the courses of action that the person believes to be available to her in any given context. The concept is implicit in choice and decision models of motivation (e.g., Atkinson and Feather, 1966; Atkinson and Raynor, 1974) in which the individual is viewed as choosing between options for acting, dependent on the calculation of the value of the outcome and the probability of achieving it. Yet little consideration was given to the richness of alternatives that exist for students faced with choosing to study or play. In particular, this research did not prompt a line of research on how an individual—through background, experience, and present group membership—might hold a different cognitive matrix of available options. In

everyday terms, individuals simply can't consider doing certain things—either because they do not know that they can be done, don't believe that it is acceptable to do them, or have no knowledge regarding the instrumental nature of these options. For children in the inner city of Detroit, taking cello lessons is seldom an option even if they happen to know what a cello is. Planning for or choosing to attend an elite school is a realistic option for some, but not others. The same can be said in reference to "magnet schools" and other so-called "schools of choice." Using leisure time to do homework is more or less a choice depending on space available *and* the norms of reference groups with whom the individual interacts. As psychologists study motivation as a directional course taken by an individual, they can hardly ignore the set of options from which that individual must choose. Perhaps because this seems so obvious, it is easy to ignore. We submit, however, that especially in dealing with motivation across diverse settings and groups one truly has to be sensitive to, and analytic about, this facet of a person's life.

Although it is easy to acknowledge that individuals act in terms of the action alternatives available to them, it is not so easy to find instances in the literature where this issue is seriously pursued. There are many stories that can be told here, but precious little analysis. One entree to this area of exploration is provided in the work on "possible selves" (see e.g., Markus and Nurius, 1986; see also Pintrich and Garcia, 1994) where individuals are asked to *imagine what they might do or become*. The set of procedures for assessing these hypothetical self schemas seem to have considerable utility in identifying life options that are psychologically possible for the individual to explore. Perhaps another entree exists in the work on "subjective culture" (Triandis, 1972; see also Triandis, 1990). In this case the focus is on assessing the normative framework that shapes one's life: What do people see as the "right way" to act, believe, and think as a function of the social groups to which they belong and the social roles that they are expected to play. Collectively, both approaches appear to have merit in determining the alternatives from which a person must choose. A consideration of an individual's alternatives is at least a first step in understanding the direction and nature of their investment in school, learning, or any activity.

Amidst the overwhelming focus on cognition, it appears that the affective side of motivation has been essentially overlooked. Emotions played a central role in the theories of achievement developed by McClelland, Atkinson, and their colleagues. The cognitive revolution has seemingly pushed these concerns aside, but not without some loss to understanding motivational processes. Weiner (e.g., 1986) has kept the issue of affect alive in the study of attributional processes. Covington (e.g., 1992) has acknow-

ledged the affective side of motivation, especially in regard to evaluation and the individual's attempts to retain self-esteem. However, to date, *this* has been only an incidental feature of theories of purpose and goals. If emotions are considered at all they are most likely to be seen as an outcome of pursuing a goal, not integrally tied to a goal *per se*. Models for incorporating affect into the causal framework of social cognitive theories of motivation are available in research on social perceptions and attitudes (e.g., Fiske, 1995) and elsewhere (e.g., Lazarus, 1991). This seems to be an area ripe for new and venturesome research.

Finally, we note one other need for theory building. The study of motivation and schooling has, in the main, evolved out of the study of achievement. As such, the role of other social motives has typically only been explored incidentally. Social motives have often not been considered as leading to achievement, but rather as inhibiting it. Recent research within school settings has, however, begun to map out an important role for social goals in fostering achievement in school. Learning in the school context takes place in groups. Many of the current styles of teaching which have grown out of research over the past decade stress cooperative learning (e.g., Slavin, 1995), social constructivist processes (Phillips, 1995), peer teaching and mentoring (e.g., Brown and Palincsar, 1989; Palincsar and Brown, 1984), and—more broadly—the school and classroom as a “learning community.” There is a need to consider how some social relationships facilitate learning (e.g., Ladd, 1990) whereas others make it virtually impossible. Although studies of aggression and conflict have proceeded along different lines than studies of achievement and learning, we question whether this is a good idea. It is important to search for characteristics of school environments that enhance interpersonal relationships but also foster learning and achievement (Kaplan and Maehr, 1997; Urdan and Maehr, 1995; Wentzel, 1991).

### ISSUES OF GENERALIZABILITY

Motivational researchers in the “scientific tradition” are concerned with the generalizability of their constructs, the correlates uncovered, and the applicability of methods and measures across diverse groups, contexts, and persons. Most motivational research begins in a university setting and is initially inclined to employ conveniently available subjects. Although a considerable portion of the current motivation literature is based on “real world” situations and subjects, that literature remains limited in certain important respects. The generalizability of motivation theory has only been tested to a limited degree across cultures, social class, gender, and age. We select three examples that are particularly deserving of consideration.

### Culture, Class, Ethnicity, and Motivation

Sandra Graham (1991), for example, has directed special attention to the lack of representation of minorities in current motivation research. Few would argue that the consideration of culture or even social class has been subjected to intensive scrutiny as a major factor in modifying motivational patterns. Yet, the study of motivation has been as remiss as other areas of psychology in including diverse groups in the samples on which theory is based. In some ways, this is somewhat surprising. After all, one of the more dramatic studies of motivation was David McClelland's *The Achieving Society* in which the focus was specifically on cross-cultural differences in motivation that might affect achievement. Moreover, talking to practitioners makes it clear that sociocultural variables are major factors in what they see as motivation. There is good reason to believe that they are right. But it is not overwhelmingly evident that researchers are listening.

Clearly, this state of affairs has to change. We are now not only living in a smaller world, but our neighborhood schools must deal with social, cultural, and ethnic diversity to a greater degree perhaps than at any time in the recent past. This should and can be a source for enrichment in the life of students and the school. However, it can also present challenges for educators in understanding the different worlds of children who become their students. A major venture for researchers today is to investigate and attempt to understand sociocultural influences on motivation for learning. Although this may not have been the prime topic in the last decade or so, it now must be.

Several researchers have made a special point of exploring cultural and ethnic variation in construction of selfhood and in ways this may affect students' investment in schooling. As noted earlier, Ogbu and his colleagues (e.g., Ogbu, 1978; 1982; Fordham and Ogbu, 1986; see also Arroyo and Zigler, 1995) have suggested that some African-American children are essentially faced with a difficult choice: give up their identity, "act White," and invest in schooling—or, reaffirm their ethnic identity by rejecting the alien culture the school presents. Steele (1992) has indicated that the minority group status in which many African American students enrolled in predominantly white Universities often find themselves may serve to enhance not only their ethnic consciousness, but also their awareness of stereotypes held by others toward them. Placed in a situation in which their abilities are to be specifically compared to others who do not bear the burden of this stereotype, they may experience an added measure of evaluation anxiety. Not only are they tested as an individual (cf. Baumeister, 1984; Covington, 1992; Hill, 1984; Hill and Wigfield, 1984), they are challenged to disprove a prevailing stereotype for them as a member of a particular group. In a series of interesting studies, Steele and Aronson (1995)

have shown that diagnostic situations do tend to increase “stereotype threat” and that an awareness of the stereotype does reduce performance when this threat is primed from having stereotypes that exist for them as a representative of a particular ethnic group. Clearly, ethnic identity, the way people view themselves within cultural groups, and potential stereotype threats that may be associated with this, are areas deserving further consideration in future studies (cf. also, Arroyo and Zigler, 1995; Crocker and Major, 1989; Arunkumar and Maehr, 1997).

An example of another promising research direction in culture and motivation—also involving the concept of self—is found in the work of Triandis (1990) and Markus and Kitayama (1991). These researchers have called attention to how the construction of self is more collective or individualistic across cultures, leading possibly to quite different orientations toward learning and achievement more generally. Along this line, Salili (1995) argues that within certain Chinese cultures, achievement is pursued as a matter of faithfully fulfilling a family role, perhaps a family obligation. Such collective views of self are likely to exhibit themselves in a variety of ways which are important to the school and about which researchers know all too little. They primarily know that some children from “collectivist” backgrounds seem to excel (e.g., Caplan *et al.*, 1992).

In sum, the recognition of the place and importance of sociocultural factors in the study of motivation opens up a host of new questions to be pursued. The problems and challenges that sociocultural issues present cannot and should not be avoided, and they promise to be where much of the future of motivational research will move. Although a fair beginning has been made in this regard, it is only a beginning. Much, much more attention must be invested in this effort. The reasons for this are not just theoretical. Teachers often report that one of their major problems is “motivating children,” especially children that have a different background than their own; a phenomenon that is not just evident in the U.S. but in schools around the world. Research that does not consider how sociocultural factors shape motivation is doomed to have limited value for educators—or anyone, for that matter.

### Gender and Motivation

A number of researchers in the field of motivation have been studying how gender is related to motivation (see for example, Bailey, 1993; Eccles *et al.*, 1982, 1983, 1993; Frey and Ruble, 1987; Meece and Eccles, 1993; Roberts, 1991). Gender needs to remain on the agenda, and in many ways the issues posed in the study of students of different cultural backgrounds

parallel issues pertinent to the case of gender. How is gender related to a student's approach to learning and motivation in school? Gender can affect a student's sense of self, sense of self-efficacy, and perceived options which in turn affect motivation and achievement (e.g., Eccles *et al.*, 1982, 1983, 1993; Frey and Ruble, 1987; Roberts, 1991). In achievement situations, women have less self-confidence than men (e.g., Eccles *et al.*, 1982). Women and men also respond to evaluative feedback differently: Women perceive others' evaluations as more informative about their abilities than men (as cited in Roberts, 1991). Eccles *et al.* (1993) found that elementary aged girls and boys had different competence perceptions, with boys feeling more competent in stereotypically "male" areas (math, sports) than girls.

Girls also have lower achievement in math and science when compared to boys (Bornholt, Goodnow, and Conney, 1994; Fennema and Leder, 1990; Bailey, 1993). It is not surprising then that boys and men pursue more math and science related fields than girls and women (Fennema and Leder, 1990; Bailey, 1993; Kahle, Parker, Rennie, and Riley, 1993). What this research often fails to examine is the meaning of these gender differences. Are girls not scoring as high as boys on achievement tests because they are either not encouraged or because they are discouraged by parents, peers, and teachers? Fennema and Leder (1990) and Eccles (1989) found that male students interact more frequently with teachers than do female students. Male students receive more disciplinary attention from teachers but also more praise than female students. Teachers tend to criticize female students more frequently for the academic quality of their work, and they tend to encourage male students more frequently to be independent. When students interact in groups consisting of both boys and girls, girls are often silenced or excluded by their male classmates (Bailey, 1993). This is particularly true when the subject matter involves math or science. However, girls are much more likely to benefit from cooperative group activities than competitive situations, particularly in the field of math (Peterson and Fennema, 1985).

There are also questions about how gender is related to test results. It is common practice for motivation and achievement to be evaluated by standardized measures or exams, for example, the SAT's. What is not usually considered is that boys and girls tend to respond to testing situations differently. Girls tend to score lower than boys, on average, on the math section of the SAT (as cited in Bailey, 1993). However, if one examines how young men and women perform in college level math courses, women perform better, on average, than men. Girls also tend to do better than boys on essay exams, whereas boys tend to perform better than girls on multiple-choice exams (as cited in Bailey, 1993). These factors may have

an influence on the achievement of males and females, and must be considered whenever motivation is being investigated.

Finally, there is the question of the value that girls and women place on subject matter that is traditionally "masculine" or "male" when consideration is given to perceived options (Eccles *et al.*, 1983). What do young girls believe they *can* achieve? If Eccles *et al.*'s (1983) expectancy-value model is considered, then girls' achievement in certain subject areas could be explained, not by biological or genetic factors, but by the differential perceptions of females and males. Simply put, a student's level of achievement in a particular arena could be explained by a combination of his/her expectancy for success and the "subjective value" he or she places on that task. The fact that there are fewer women pursuing courses in math and science could be explained by a combination of their expectancy for success and the value they place on the importance of math or science in their future. Again, we caution the reader to consider gender when studying achievement and motivation and to look beyond the individual differences to the culture of gender and the meanings that girls and women create as a part of this culture rather than simply conduct comparative research. Moreover, in view of the previous call for considering motivation in sociocultural context, motivational researchers should attend to gender differences in the case of differing ethnic, cultural, and socioeconomic groups. For example, what is the cumulative motivational impact of being a woman and a minority or a woman and poor (e.g., Pollard, 1993; Flanagan, 1993)?

### Age and Motivation

The emergence of motivation patterns in the early grades has not been studied extensively. Although one can point to studies here and there that employ participants across the life span, there are distinct gaps in researchers' knowledge about the potential shifts in motivation throughout development. For example, when motivation is studied in schools, more often than not the focus is on older children. Perhaps this is because they can read and are generally more "manageable" within research paradigms. Yet, a focus on the importance of the meaning of schooling may make it especially important to examine how meanings, concepts, beliefs, and perceptions of school emerge in the early years and how they affect the investment of the individual student. What ideas or conceptions do children bring to school? How do changes in these conceptions relate to what happens to the child in school?

Kindergarten children have coherent conceptions of school (Klein, Kantor, and Fernie, 1988). Young children can also verbalize their ideas about abstract topics when these concepts are discussed in relation to their own school experience (King, 1979). Notably, Dweck *et al.* (1993; Smiley and Dweck, 1994) and Stipek *et al.* (e.g., Stipek and MacIver, 1989; Stipek *et al.*, 1995) have specifically begun to study the nature of motivational patterns in early childhood.

Thus, it is indeed possible to study motivation in young children. They have the capabilities to talk about school and motivation if asked in a developmentally appropriate manner. Research has already shown how one can go about identifying behavioral indicators of their predilections. Moreover, it may be especially important to consider motivational development in its earliest stages. Children come to school with some view of themselves, including some variation in how confident they feel about adjusting to school and doing school "work." Young children are also likely to have certain theories of school that embrace purposes and reasons for doing what they are asked to do that in turn affect their investment. In preliminary studies (e.g., Meyer and Gelpi, 1997), we have been interviewing kindergarten students about these views while also observing how teachers in the primary grades shape these ideas or theories in ways that are bound to be of enduring significance. Systematic follow-up of such efforts would be desirable, but such research requires the development of a broader range of methods than are currently available in the motivational literature.

On the other end of the developmental spectrum, the motivation of "older" individuals has also been neglected. This may not seem like a problem that should be at the top of the list for educational researchers. However, it is desirable to consider education and learning at all developmental levels. The motivation of teachers as well as the motivation of students merits attention. Given an aging population that continually needs to have its skills and knowledge updated, it is important to pay attention to the motivation and learning patterns of adults (Maehr and Kleiber, 1981). Aside from the variety of such observations that could be made in this regard, there is one basic point we wish to make. As motivation research has cast its lot with cognitive theory and "meaning metaphors," there seems special reason to understand how thinking processes are likely to change with age. For example, it may be that older individuals can operate in terms of multiple goals, adapting from situation to situation, as the task demands. Younger individuals may be less flexible. The fact of the matter is that psychologists know little about motivation as a life-long process, and they need to consider how these concepts that frame motivational life develop throughout the life span, especially as a function of school experiences.



## CONCLUSIONS

There is much still on the agenda in the study and understanding of motivation and schooling. We have only provided a brief sketch of where motivation theory and research is, where it might go, and what needs to be done. We trust that our discussion of motivation and schooling has been sufficient to provide some sense of the vibrant nature of intellectual life in this domain as well as to suggest opportunities and possibilities for those tempted to consider the area as a venue for their own work. The authors recognize that a brief overview of such an extensive field can do little more than potentially stimulate the reader's own construction of what needs to be done. However, that for us is sufficient!

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