History of Motivational Research in Education

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The history of motivational research in education is traced through chapters on motivation in the *Encyclopedia of Educational Research* from 1941 to 1990. Discussion of the drive concept, the motivation–learning distinction, the role of individual differences, and the emergence of cognitive concerns and the self are examined. Great shifts are documented, and current as well as future trends are discussed.

The 10th anniversary of the founding of the Motivation in Education Special Interest Group of the American Educational Research Association provided the occasion for me to look back on the field of motivation and ask where we have been and where we are going. There are many possible strategies to take in reaching a retrospective summary. One might count and catalog past articles, solicit and synthesize opinions of the major figures in the field, and so forth. The material for my analysis of the state of motivational psychology is provided by the *Encyclopedia of Educational Research*, which is perhaps a compromise between personal cataloging and soliciting the opinions of others. This volume has been published each decade starting in 1941; thus five articles exist and a sixth is forthcoming which summarize the research conducted between 1930 and 1990. I have been asked to write the chapter for the 1990 edition. This will be my second review, for I also wrote the chapter 20 years earlier for the 1970 publication. Hence, not only am I able to examine the contents of the field over a 60-year time span, but I also can overcome the confounding involved in comparing the writings and biases of different authors by considering differences within the same author (myself) over a 20-year time span (making the questionable assumption that my own biases remained constant over this period).

In this article, I will use the contents of the *Encyclopedia of Educational Research* articles as a scaffold for discussing the history of our field, the emergence and disappearance of central issues in motivation, the progress that has and has not been made, the problems that exist, current directions, and a potpourri of related topics.

I view this field with a schizophrenic reaction. On the one hand, I feel some despair. The question that teachers and parents ask of us is how to motivate their students and children, and we are not very adept at providing answers. The lofty place that motivation once occupied in the research enterprise of psychology is no longer held. At one time,

motivation was the dominant field of study; certainly this is no longer true. During the decades between 1950 and 1970, the *Nebraska Symposium on Motivation* was one of the most prestigious publications and commanded a great deal of attention; that is no longer the case. In one year, Clark Hull, the pivotal figure in the growth of drive theory and the experimental approach to motivation, was cited in almost 70% of the published experimental articles; we have no contemporary figure of such dominance.

At the other pole of my schizophrenic reaction, I feel optimistic. There are now well more than 150 active members of the Motivation in Education Special Interest Group, many with their own students and research groups. Interest in and articles about motivation are increasing in a number of journals (see Ball, 1984); there is a recent three-volume set edited by R. Ames and C. Ames (1984) and C. Ames and R. Ames (1985, 1989) on motivation in education; and for the first time in nearly 20 years, there is going to be a *Nebraska Symposium* volume that is actually devoted to motivation (Dienstbier, 1990). The future therefore looks promising for the general field of motivation and for motivational research related to education.

Having shared my deeply mixed emotions, let me turn my thoughts to history. This will allow further opportunity for expression of these conflicting personal opinions.

Motivation as Represented 1940–1960

The first two motivation chapters in the *Encyclopedia of Educational Research* were written by Paul Thomas Young (1941, 1950). Young, who was at the University of Illinois, was known for his hedonic theory of motivation and his examination of the intrinsic emotional and motivational properties of substances such as saccharin. He was a prolific writer, producing some of the very early books that outlined an experimental approach to the study of motivation. Young wrote both the 1941 and 1950 chapters, following the same outline in each publication.

The contents of his chapters are shown in Table 1. It can be seen in Table 1 that the major research topics in the field were activity level, appetites and aversions, homeostasis, chemical controls, and neural structures, as well as incentives, defense mechanisms, and the degree of motivation (the Yerkes–Dodson law of optimal motivational level). Some specific concerns for educators were discussed, including praise and reproof, success and failure, knowledge of results

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Table 1
Contents of the Chapters on Motivation in the Encyclopedia of Educational Research, 1941–1990

Descriptor	1941 and 1950	1960	1969	1982	1990
Author	P. T. Young	M. Marx	B. Weiner	S. Ball	B. Weiner
Content	Need and activity level Appetite and aversion Equilibrium and homeostasis Chemical controls Neural structures Incentives Defense mechanisms Degree of motivation Educational Applications Praise and reproof Success and failure Knowledge of results Cooperation and competition Reward and punishment	Theories Techniques Drive and learning Drive and frustration Activation of drives and motives Reward Knowledge of results Fear and anxiety Arousal	Theories Associative Drive Cognitive Psychoanalytic Topics Curiosity (exploratory behavior) Affiliation Imbalance (dissonance) Frustration Aggression Relation to Processes Learning Perception Memory	Attribution theory Achievement motivation Anxiety Self-esteem Curiosity Level of aspiration Affiliation Minor areas Biochemical correlates Reinforcement theory	Cognitions Causal attributions Self-efficacy Learned helplessness Individual differences Need for achievement Anxiety about failure Locus of control Attributional style Environmental determinants Cooperation versus competition (goal structure) Intrinsic versus extrinsic rewards Praise

(feedback), cooperation and competition, and reward and punishment. The educational topics not only overlap but also appear more contemporary and familiar than his outline of general motivational research.

These fields of study, popular just 40 years ago between 1930 and 1950, are readily understandable, given the roots of motivational psychology. Initially, the experimental study of motivation (the Latin root of *motive* means to move) was linked with the search for the motors of behavior and was associated with concepts such as instinct, drive, arousal, need, and energization. Motivational psychologists were concerned with what moved a resting organism to a state of activity. Accordingly, hungry rats were deprived of food, and even curious monkeys were placed in rooms without visual stimulation. It was believed that a discrepancy between an ideal "off" state and a less-than-ideal "on" state (i.e., the presence of a need) would be detected by the organism and would initiate activity until this disequilibrium was reduced to zero. Hence, the effects of a variety of need states on a variety of indexes of motivation, including speed of learning and choice behavior, were examined. Borrowing concepts such as energy systems from the physical sciences and using machine-based metaphors such as overflowing energy and drainage from a container of fixed capacity constituted one strategy used to gain scientific respectability for this uncertain field.

The concept of a deprived organism living in an environment of limited resources gave a functionalistic, Darwinian flavor to the field of motivation, which in the decades between 1930 and 1950 was dominated by the tribal leaders of Hull and Spence and by the less expansionistic Tolman. It also gave rise to taxonomies of instincts and basic need states, as exemplified in the writings of William McDougall (1923) and Henry Murray (1938), and to other issues related to the dynamics of behavior and the instrumental value of action. For example, motivational psychologists examined conflict resolution under circumstances in which a positive goal is located in a shocked region, what behavior follows when an anticipated goal is not attained, and whether psychological equilibrium requires reduction in need state to a zero level of internal stimulation (as opposed to an optimal level greater than zero). The reader is directed to Atkinson (1964), Brown (1961), Mook (1987), Petri (1986), and Weiner (1972, 1980) for historical overviews of earlier research activities. It is evident, then, that Young captured the mainstream preoccupations in motivation through his coverage of need and activity, approach and avoidance tendencies, homeostasis, and underlying motivational mechanisms.

The topics linked with educational psychologists were quite divorced from the mainstream of the study of motivation. Basic research in motivation was associated with subhuman behavior, for example, the maze or straight-alley actions of hungry or thirsty rats. Human behavior was considered too complex to study directly and not subject to experimental manipulation, which meant deprivation because the basic motivational model embraced viscerogenic needs and homeostasis.

Forty years after 1950, the problem of being out of the mainstream no longer applies to educational psychologists, as is discussed in the following paragraphs. However, another

problem that in 1941 was considered to have been solved has remained a serious burr in our saddles. The dilemma involves the motivation–learning or performance–acquisition distinction. A key juncture in the field of motivation occurred in the 1930s when it separated from the field of learning. Hullians had argued that in order for learning to occur, there must be response reinforcement and drive reduction. That is, a response must be followed by an incentive for there to be a change in habit strength and a subsequent increase in strength of motivation. But Tolman (1932), in his acclaimed research on latent learning, demonstrated that there can be learning without reward and drive reduction; incentives, which were introduced into the goal box after an animal had an opportunity to explore the maze, were shown to affect performance, or the utilization of structure, rather than learning, or the change in structure. Motivational psychologists at that time argued that the study of motivation is therefore separable from the study of learning; motivation examines the use, but not the development, of knowledge.

However, for the educational psychologist, the prime issue always has been how to motivate people to engage in new learning, not how to get people to use what they already know, which is a more appropriate issue for industrial psychologists. The study of motivation for the educational researcher thus has been confounded with the field of learning; indeed, motivation often is inferred from learning, and learning usually is the indicator of motivation for the educational psychologist. This lack of separation, or confounding, between motivation and learning has vexed those interested in motivational processed in education, in part because learning is influenced by a multiplicity of factors including native intelligence. This confounding problem can even be seen in the outline of Young, because he included knowledge of results, for example, among the determinants of motivation, yet it surely influences the degree of learning.

I will mention only briefly the ensuing *Encyclopedia of Educational Research* article because it continued in the tradition set forth by Young. The chapter was written by Melvin Marx (1960) of the University of Missouri (see Table 1). Marx also linked motivation with energy and drive level. The main topics he examined (after a lengthy discussion of types of drive theories and methods of study) were drive and learning, drive and frustration, activation of drive, rewards, knowledge of results, fear and anxiety (which were considered learned drives) and arousal. Hence, Marx remained in the tradition of Hull, Spence, Mowrer, N. Miller, and others of the Yale and Iowa schools who were guided by the machine metaphor of motivation. The center of motivational research still had little connection with or relevance for educational psychologists.

Motivation As Represented in 1969

I was responsible for the next *Encyclopedia of Educational Research* chapter, which summarized the research in the 1960s (Weiner, 1969). The topics covered are listed in Table 1. First, I reviewed the four most dominant theoretical approaches: associationistic theory (John Watson), drive theory (Hull and Spence), cognitive theory (Kurt Kewin and John Atkinson), and psychoanalytic theory (Freud). In addition, the specific research areas reviewed included exploratory behavior, affiliation, balance (dissonance), frustration, and aggression. Furthermore, motivation was related to other process areas including learning, perception, and memory. It is quite evident that although Hull and Spence were represented, there was relatively little discussion of drive, energy, arousal, homeostasis, and other mainstays of drive theory.

One can attribute this rather dramatic shift to the writer, but as a chronicler (i.e., a historian without a philosophy) I deserve neither the credit nor the blame. Major changes had occurred, some starting before Marx (1960) wrote his chapter on motivation and others flowering in the 1960s. First, there was the more general shift in psychology away from mechanism and toward cognition. For example, in the psychology of Edward Thorndike, which was entirely incorporated by Hull, proponents believed that a reward would automatically increase the probability of the immediately prior response, thus augmenting later motivation when in that environment. However, it was gradually learned that if reward is perceived as controlling, then it undermines future effort, whereas reward perceived as positive feedback is motivating (Deci, 1975). Furthermore, reward for successful completion of an easy task is a cue to the receiver of this feedback that he or she is low in ability, a belief that inhibits activity, whereas reward for successful completion of a difficult task indicates that hard work was expended in conjunction with high ability, a belief that augments motivation. In addition, reward in a competitive setting is based on social comparison information, signaling that one has high ability and is better than others, whereas reward in a cooperative context signals that one has bettered oneself and has tried hard. Hence, it became recognized that reward has quite a variety of meanings and that each connotation can have different motivational implications. For the field of motivation, this ultimately signaled that the "winner" of the Hull–Tolman debate was Tolman, the cognitivist, rather than Hull, the mechanist. The broader Tolman cognitive camp included, or was preceded by, Lewin, who at times teamed with Tolman at Berkeley, and John Atkinson, as well as Julian Rotter, who was unfortunately and unfairly overlooked in my 1969 chapter.

The cognitivists had, in general, a different research agenda than did the mechanists. For example, one of Lewin's main research interests was level of aspiration, or the goal for which one is striving. In a similar manner, Atkinson devoted his attention to the choice between achievement-related tasks differing in level of difficulty. Thus, when cognitive approaches to motivation carried the day, this resulted not only in a different theoretical orientation but also in a new empirical outlook. That is, it was not "business as usual," with Tolman's cognitive maps merely replacing Hull's habit strengths. Rather, researchers began to concentrate on human rather than on infrahuman behavior. It became just as respectable to generalize from human to nonhuman behavior as vice versa. So, just as Hull speculated about human motivation from studies of rats, Lewin speculated about the behavior of rats from the study of humans! Furthermore, of the many possible topics for human research, issues associated

with success and failure and achievement strivings formed the heart of the empirical study of motivation. This was in part because of the manifest importance of achievement strivings in our lives. In addition, success and failure could be readily manipulated in the laboratory and their effects on subsequent performance determined. This was perhaps no more difficult than depriving or not depriving lower organisms of food and testing the effects of deprivation on performance. Finally, there were many naturally occurring instances of achievement outcomes that could be subject to field research, including the classroom. There was an open door for educational research.

In sum, motivational research became almost synonymous with achievement motivation research. Educational psychology thus shifted into the spotlight, away from the periphery where it was, properly, first identified in the reviews of Young (1941, 1950) and Marx (1960) shown in Table 1. Of course, other uniquely human concerns were captured in the 1960s, including affiliative behavior and cognitive balance. But these pale in comparison to the attention given to achievement strivings.

However, in the 1960s motivational psychologists were not totally transformed by the general shift from mechanism to cognition. For example, research concerned with cognitive balance and dissonance made use of drive theory concepts, particularly drive reduction and homeostasis (e.g., cognitive dissonance, or an imbalance among cognitive beliefs, was considered to be a drive, and humans were believed to be driven to bring themselves back to a state of equilibrium, or cognitive consonance, in which all beliefs "fit"). In addition, theorists in the 1960s primarily (but not quite exclusively) embraced the concept of subjective expectancy of success, albeit little else from the vast array of relevant motivational thoughts. Thus, there was some contentment merely in eliminating the term *drive* and replacing the notion of *habit* with that of *expectancy*.

In addition, the cognitive motivational theorists remained wedded to the "grand formal theory" approach of Hull and Tolman, setting as their task the isolation of the determinants of behavior and the specification of the mathematical relation among these factors. This is illustrated in the very dominant Motive × Probability × Incentive formula of Atkinson (1957, 1964) and the very closely related (and prior) theories of Lewin (1935) and Rotter (1954). All of these were known as expectancy–value theories—motivation was determined by what one expected to get and the likelihood of getting it. The cognitive approach also embraced the "slice in time" construal advocated by Lewin. An ahistorical construal of motivation lent itself to analysis of variance as the appropriate statistical methodology, so that variables typically were manipulated in 2 × 2 designs (or what might be called "Noah's Arc" experiments). Finally, it became accepted that organisms always are active, and as a result, the key dependent variables in motivation became choice and persistence, indicators of the direction of behavior.

With the waning of "mechanism," of machine metaphors, drive and homeostasis as motivational constructs, and research with lower organisms, along with the advent of cognitivism, rational person metaphors, human motivational research, and achievement strivings as the center of motivational thought, there also came another important research direction. Attention began to be focused on individual differences, with persons characterized as high or low in achievement needs, high or low in anxiety, high or low in internal control, and so forth (following the Noah's Arc paradigm). For the educational psychologist, so interested in those individuals not performing well in the classroom, this was an important and a compatible shift that could not have come about with a psychology based on nonhumans.

The main individual differences that were studied were not derived from broad concerns about personality structure. Rather, an individual difference variable was selected on the basis of motivational theory; a measure of that variable was created; and then this measure was added to other factors within a more encompassing research design that included individual differences as one variable. How this structure related to or fit with other personality structures was not of concern, and researchers often paid little attention to the measure in comparison with the measures developed by assessment psychologists. When Spence was asked what he would do if a measure of anxiety did not result in the predictions made by drive theorists, he quickly said that he would throw out the assessment instrument!

The dominant individual differences that were studied and their linked assessment instruments—need for achievement and the Thematic Apperception Test, anxiety about failure and the Test Anxiety Questionnaire or the Manifest Anxiety Scale, and locus of control and the Internal–External Scale—share a common process of development. First it was demonstrated within a well-articulated theoretical framework that a particular situational manipulation had a motivational effect. Then it was documented that individuals could be selected who differed in ways that mirrored the environmental effect. For example, achievement theory specified that when achievement concerns are aroused by means of test instructions or failure, achievement strivings are augmented as compared with a neutral or nonarousing manipulation (see Atkinson, 1964). It was then contended that some individuals act as if they are more aroused than others when both groups are in the identical environment. That is, some individuals are more sensitized to achievement cues than are others and thus exhibit augmented achievement strivings, as though the two groups actually were in differentially arousing environments. In sum, the creation of the individual difference measure followed the successful manipulation of a situational variable that captured a particular motivational phenomenon.

In a similar manner, drive theorists had demonstrated that conditioning is more rapid when individuals are exposed to a large aversive stimulus, such as an intense shock, than when subject to a less severe shock. It was then reasoned that some individuals might be more emotionally aroused in the same aversive environment than are others, and thus would condition faster. Such people were labeled as high in drive or high in anxiety (Spence, 1958). Subsequent demonstrations showing that individuals who scored high on the Manifest Anxiety Scale did condition faster than those who scored low not only validated the individual difference measure but also lent supporting evidence to drive theory.

Finally, social learning theorists had documented that expectancy shifts are more typical (increments after success, decrements after failure) when individuals' perform on skill rather than chance tasks. Social learning theorists then reasoned that some individuals would perceive events in the world as skill determined and therefore subject to personal control, whereas others would construe events as chance determined and therefore not amenable to personal control. Thus, in the identical neutral context, individuals in the former group would exhibit more typical expectancy shifts than luck-oriented individuals (Rotter, 1966).

To summarize, individual difference measures for achievement needs, anxiety, and locus of control were devised to identify persons thought to differ in motivationally significant ways. In their early stages of development, these measures and their corresponding predictions were closely tied to the theories that spawned them and generated a vast amount of research, which I touched upon in the 1969 *Encyclopedia of Educational Research* article.

Motivation As Depicted in 1982

The next motivation chapter in the *Encyclopedia of Educational Research* appeared in 1982 and was written by Samuel Ball. Ball is in part known to us because of his service as editor of the *Journal of Educational Psychology*. In that capacity, he very much encouraged the submission of motivation articles, and publications in motivation flourished under his editorship.

The topics covered by Ball (1982) included attribution theory, achievement motivation, anxiety, self-esteem, curiosity and, to a much lesser extent, level of aspiration, affiliation, biochemical correlates of motivation, and reinforcement (see Table 1). Thus, there clearly is a continuation of the trends observed in the 1960s. That is, there is even greater focus on human behavior, particularly achievement strivings; there is an increasing range of cognitions documented as having motivational significance, such as causal ascriptions; and there is enduring interest in individual differences in achievement needs, anxiety about failure, and perceptions of control. In addition, we see the beginnings of attention paid to the self, as illustrated in self versus other causal ascriptions for success and failure, strategies that maintain personal beliefs in high ability, self-efficacy (Bandura, 1977), and so forth. During the 1970s, the study of infrahuman motivation (excluding the physiological mechanisms) and the associated drive concept had virtually vanished, indeed not that many years after the heyday of Hull and Spence.

Motivation Today

Finally, we come to the 1990 motivation chapter (Weiner, in press). The outline is shown in Table 1. The topics include the cognitions of causal attributions, self-efficacy, and learned helplessness; the individual differernces of need for achievement, anxiety about failure, locus of control, and attributional style; and the environmental variables of competitive versus cooperative contexts, intrinsic versus extrinsic rewards, and

praise. It is of interest to note that the category of environmental determinants includes topics similar to those contained in the outlines of Young (1941, 1950). The remaining topics, however, were not existent in his earlier articles. This indicates not only the emergence of new areas of research but also the ascendance of issues relevant to educational psychologists.

Let me expand somewhat on the chapter contents and link this material with the larger historical framework that has been outlined.

1. The grand formal theories that composed the first part of my 1969 chapter—drive, psychoanalytic, cognitive, and associationistic conceptions—have for the most part faded away. After all, Freud's emphasis on the unconscious, sexual motivation, and conflict and Hull's emphasis on drive and drive reduction, seem to have little relevance in classroom contexts. What remain are varieties of cognitive approaches to motivation; the main theories today are based on the interrelated cognitions of causal ascriptions, efficacy and control beliefs, helplessness, and thoughts about the goals for which one is striving.

There is some loss with the fading of larger theories, because this is exactly what a number of central ideas and concepts in motivational psychology need. For example, the differentiation of intrinsic and extrinsic motivation, which was of central importance in the history of the cognitive emergence, is not developed in the sense of being included within a system of interrelated concepts. Thus, its relation to other concepts such as origin–pawn, internal–external control, the flow of experience, and so forth, is unclear. The lack of theoretical elaboration reduces both the generality and the precision of these intertwined approaches.

2. Achievement strivings remain at the center of the study of motivation. There are major pockets of research on power motivation, affiliation, exploratory behavior and curiosity, altruism, aggression, and so on. But these are circumscribed areas in which researchers focus on domain-specific content rather than on the development of general theory. I regard this narrowing as a major shortcoming of the field, one that greatly limits the generality of our laws as well as the likelihood of discovering new regularities. On the other hand, for those solely interested in classroom achievement strivings, the lack of theoretical generality may not be of great concern.

Within the achievement field, a somewhat new approach is vying for a dominant role with the need for achievement and causal ascriptions. This approach, sometimes called "goal theory," embraces the linked concepts of ego-involvement, competitive reward structure, social comparison as the indicator of success and ability attributions (as contrasted with task-involvement, cooperative structure, self-comparison as the indicator of success and effort attributions; Ames, 1984; Covington, 1984; Nicholls, 1984). I regard this as a major new direction, one pulling together different aspects of achievement research.

3. As intimated previously, there is increasing incorporation of a variety of cognitive variables, as exemplified in the triad of causal cognitions, efficacy beliefs, and helplessness, as well as in the source of information (self or others) that is used to determine subjective success or failure. However, the

main new cognitive direction is the inclusion of the self. Indeed, even the aforementioned cognitions all concern perceptions about the self as a determinant of prior or future success and failure. Add to these the constructs of self-actualization, self-concept, self-determination, self-esteem, self-focus, self-handicapping, and the remainder of the self-alphabet, and it is evident that the self is on the verge of dominating motivation.

4. The review of the individual difference variables conveyed that this direction of motivational research is rapidly diminishing, if it has not already been abandoned. The difficulty with motivational (as opposed to cognitive) trait concepts, which was pointed out by Mischel (1968), is the lack of cross-situational generality. This has created a tremendous barrier for the motivational psychologist. For example, if an individual has high achievement strivings in sports but not academics, and this individual is classified as high in achievement needs, then predictions will be upheld in one situation but disconfirmed in the other. A second major problem is that the individual difference variables took on lives of their own and became more popular and focal than their founding theories; these monsters consumed their masters so that, for example, locus of control was related to a huge number of variables but not to expectancy of success, which was the one variable that it was linked with theoretically.

I do not mourn the passing of this stage, but I do mourn the loss of activity that the motivational trait approach spawned. One reason for the current void in research on individual differences is the lack of larger theoretical frameworks that provide the context for the identification and growth of pertinent individual difference variables. The importance of theory for individual difference research has been recently documented in the creation of attributional style questionnaires, which developed from learned helplessness and attribution theory (Seligman, 1975; Weiner, 1986).

5. There is growing interest in emotion, which is touched upon in the forthcoming *Encyclopedia of Educational Research* motivation chapter (see Clark & Fiske, 1982). When Hull argued for the centrality of drive and Tolman argued for the centrality of cognition, they both neglected emotion (save for the acceptance of the very general pleasure–pain principle). In addition, other investigators considered only in a cursory manner affects such as pride (Atkinson, 1964) or frustration (Lewin, 1935). However, the neglect of emotion is now being redressed. The central cognitions of causal ascriptions and helplessness perceptions are linked with emotional reactions. In a similar manner, focus on the self has promoted interest in self-directed emotions including pride, shame, and guilt. I feel quite certain that emotions will be examined at great length in the *Encyclopedia of Educational Research* motivation article written for the year 2000. At that time, there will be some mapping between the structure of thought, discrete emotional experiences, and the motivational messages of these experiences.

Motivation in the Future

In addition to the research agendas implied in the prior paragraphs, there are two others that I believe or hope will become manifest. First, there should be a greater number of motivational investigations that are not linked with learning. There is an abundance of evidence that motivation influences a vast array of other variables, including affective experience, self-esteem, and so forth. Educational psychologists must broaden their nets to capture the richness of motivational impact.

My second hoped-for agenda stems from the current dominance of issues related to the self, self-directed emotions, and what may be called a psychology of the individual. I view this narrow focus with mixed emotions and some trepidation. To explain this reaction, let me return to some basics about motivation and what this concept means to teachers and parents. When teachers and parents say that a child is "not motivated," they may refer to a behavioral observation (e.g., the child is not working with intensity or persistence at homework), to inferences about intrinsic interest (e.g., the child is studying only because of extrinsic bribes), or to engagement in activities that are antithetical to the goals of teachers and parents (e.g., the child is engaged in sports). Thus, for example, if someone is playing baseball whenever possible and spending time thinking about baseball rather than school-related concerns, then that person is considered by teachers and parents as "not motivated." However, if this same behavior characterized a professional baseball player, then that person would be described as highly motivated. He or she would be admired and praised. Motivation therefore is a work-related rather than a play-related concept and must be considered within the context of social values and the goals of the superordinate culture.

When the study of motivation shifted from animal to human research, there indeed was an increase in the accepted importance of cognitions as determinants of behavior and in the centrality of achievement strivings as opposed to deprivation-related activity. But there is another overlooked aspect of this research shift, namely, achievement behavior influences and affects others, who have behavioral expectations. Rats are engaged in a zero-sum game; if they do not strive to get food, the other rats are not necessarily unhappy about this and Darwinian principles are likely to prevail. However, learning need not be divided and shared and school motivation requires the development and the incorporation of the values of others. Hence, we have to consider frameworks larger than the self, and older motivational constructs, such as "belongingness," must be brought into play when examining school motivation. This has been implicitly part of the trend toward cooperative learning, but it must be explicitly recognized and studied. In sum, school motivation cannot be divorced from the social fabric in which it is embedded, which is one reason that claims made upon motivational psychologists to produce achievement change must be modest. There will be no "person-in-space" for the field of classroom motivation unless there is corresponding social change.

A Concluding Note

Tracing the history of our field through the motivation chapters of the *Encyclopedia of Educational Research* reveals great vigor and movement. In just 60 years there have been

major upheavals in the field, metaphors replaced, important new areas uncovered, and essential new concepts introduced. We now have a broad array of cognitions and emotions to work with, the self to consider, thoughts about goals, and so forth. In addition, we still have many uncharted areas to incorporate. In sum, we are in a fine position.

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