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THOUGHTS AND ACTIONS ASSOCIATED WITH ACHIEVEMENT MOTIVATION

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This paper presents an overview of prior research in the area of achievement motivation Further, recent findings are presented which suggest that beliefs concerning the causes of success and failure may mediate between the level of achievement, needs and behaviour The disparate consequences of attributing an outcome (success or failure) to effort as opposed to ability are discussed

In a discipline characterized by as many fads and fashions as psychology, it is especially impressive that research in the area of achievement motivation has continued for two decades This work has passed through various phases, and investigators in many parts of the world are at present pursuing a variety of issues which can be subsumed under the rubric of achievement motivation Included among the phases and problems have been the development of a projective instrument to assess individual differences in the need for achievement (15), the formulation and subsequent elaboration of mathematical models of achievement-oriented behaviour (1, 2, 18), and investigations of economic growth throughout history using need for achievement as the predictor variable (14) These are but a few of the main lines of development, they are discussed in detail in numerous recent contributions to the psychological literature (e g , 4 5, 6 10) Because of this extant literature I will not discuss many of the problems which are germane to this area I will, however, summarize some of the achievement-related actions which have been found to characterize individuals classified as high or low in achievement-related needs Whenever possible, the relevance of these patterns of behaviour for educational practices will be pointed out Then I will proceed to discuss some current work, primarily originating in our laboratory at the University of California, Los Angeles, concerning the belief systems which are associated with achievement concerns

THE OBSERVED ACTIONS

Choice behaviour

Given a free-choice situation, that is, one in which the individual can select any available alternative, individuals who are classified as

high in achievement-related needs tend to initiate achievement-oriented actions, while those considered low in this motivational constellation tend to avoid such activities In addition to undertaking achievement activities, the high motive group also is predisposed to arrange the environment so as to increase the likelihood of success at achievement-oriented activities For example, individuals high in need for achievement are likely to choose a work partner who performs efficiently, rather than one who will merely be friendly (9) It has been reasoned that for the low motive group some other source of motivation (e g , money, social needs) is necessary before they will undertake achievement-related activities Note that it is therefore possible for the two disparate motive groups to exhibit the identical intensity and persistence of behaviour in achievement settings However, while one group is performing because of the intrinsic achievement satisfaction derived from doing well (pride in accomplishment), the other group is motivated by needs which can be considered as extrinsic to achievement motivation For this reason, it should not be overly surprising to find that the grades of individuals classified as high in achievement motivation are not always found to be higher than those of students low in achievement needs Further, if getting apathetic students to study is one means to an educational goal, then appealing to *nonachievement*-related sources of motivation may, at times, be an appropriate short-run teaching strategy (e g 'if you do well on this test you can have an extra play period')

Choice behaviour also may be constrained within achievement-related options For example, a child might have to select between doing his history or chemistry, or his addition or subtraction problems In such constrained situations it has been found that individuals high in achievement motivation tend to select tasks of intermediate difficulty, while the low motive group is apt to choose relatively easy or relatively difficult tasks That is, the low motive group avoids tasks of intermediate difficulty (where the probability of success approximates 50) This choice strategy may not be as illogical as it first appears By selecting an easy task, the chances of failure are minimal, while selection of a difficult task minimizes the shame which is associated with failure Note that this risk-preference strategy indicates that the low motive group is predominantly motivated by a desire to avoid the negative affect associated with failure On the other hand, the high motive group has been described as primarily motivated by a hope of success

The differential risk-preference which has been displayed by the disparate motive groups has been demonstrated to influence a variety of actions which are of immediate concern to educators For example, it has been shown that honours students considered low in achievement-related needs are likely to choose a major subject which is too easy, given their level of ability, while non-honours students low in achievement needs are prone to select overly difficult majors (12) Similarly, vocational aspiration has been found to be unrealistic among individuals in the low motive group The occupations which they select tend to be too difficult given their ability level (13) In a less obvious extension of the differential risk-preference principle, Atkinson and O'Connor (3) found that both performance and satisfaction ratings of students high in achievement needs were enhanced when they were placed in a classroom consisting of homogeneous ability students Conversely, the students in the low motive group were more pleased in a heterogeneous than homogeneous ability grouping These attitudes and behaviours are consistent with the prior discussion if one considers a homogeneous ability grouping as representing an intermediate difficulty situation

Intensity and persistence of behaviour

As might be expected from the discussion thus far, the high achievement-related subgroup generally performs achievement activities with more vigor than the low group, and their intensity of action increases in competitive situations Analysis of the persistence of behaviour is somewhat more complex, for continuation of an activity in progress is, in part, dependent upon the strength of motivation to perform any other activities which might be available For example, one might be extremely high in achievement motivation, but cease an achievement activity if a Hollywood starlet happens to be walking past In one oft-cited study, Feather (8) found that the high achievement group persists longer when failing a supposedly easy task (which is really impossible) than when failing at a task introduced as very difficult The reverse pattern of behaviour, that is, greater persistence at the task believed difficult as opposed to easy, is true of the low achievement group These findings are consistent with the notion that the high group is especially motivated by tasks of intermediate difficulty, while the low motive group is most inhibited by such tasks (see 8 for a more complete discussion of these complex findings)

Reactions to success and failure

It also has been shown that the two motive groups exhibit differential reactions to success and failure The high achievement group apparently is motivated by failure, while they tend to 'relax' after a success On the other hand, the low motive group exhibits performance decrements following failure, while they are motivated by success Hence, the high group displays greater frustration tolerance than the low group, and also is more likely to savour the reward after a positive achievement experience (18, 19)

Teachers often have an implicit motivational scheme concerning how to obtain maximum performance from their pupils Some believe in 'scare' techniques, issuing low grades in the early part of their course Others believe in positive reward, and dispense an abundance of praise The data accumulated thus far indicates that neither of these strategies is optimal Rather, different techniques are appropriate for the opposing motive groups Indeed, the history of research in achievement motivation clearly demonstrates that individual differences interact with environmental determinants to affect performance

Summary of behaviours

There are many other behavioural differences between the contrasting subgroups which have not been discussed, related to task recall and resumption, vocational interest, perceptual sensitivity, and even handwriting and colour preferences The data we have presented thus far, however, should suffice to indicate something about the prototypical high and low achievement-oriented individuals The high achievement motivated person initiates achievement activities for their own sake, prefers intermediate risks, persists at achievement behaviours when repeated action is realistic, and responds positively to failure Conversely, the low achievement motivated person does not undertake achievement activities unless other motivations are operative, prefers tasks which are easy or difficult, persists at achievement behaviours when continuation is not warranted by the situation, and cannot tolerate failure

THE STUDY OF COGNITIVE PROCESSES

We have thus far discussed only the actions which are associated with the two 'idealized' motive groups (Of course, most individuals generally display aspects of both patterns of behaviour, with one predomin-

ating over the other) However, nothing thus far has been reported about the thoughts, beliefs, cognitions, etc of the motive groups This really should not be unexpected, for in general, psychologists have been more concerned with observable behaviour than with mental processes and thought content That is, the facts of behaviour have been studied rather than the facts of consciousness Inherent in the research on achievement motivation is the study of some mental content, for the need for achievement is assessed by means of a content analysis of the fantasy stories written by subjects Yet the content of the subjects' thoughts *per se* has been much less important than their actions This might be due, in part, to the belief expressed by leading investigators in this area that a great deal of one's motivational system is unconscious, and not available for direct verbal report

Recently, however, the trend in psychology is shifting, and the imbalance between the study of thought and the study of action is being redressed Let us consider, therefore, some of the belief systems which appear to be relevant to achievement motivation Some of the work which I will be reporting is presented in far greater detail in a recent study (20), while other portions of this discussion have not been published as yet

EFFORT AND ABILITY AS DETERMINANTS OF REWARD AND PUNISHMENT

Attributions or ascriptions about causality play an important role in the judgments which we make and in the actions which we subsequently consider appropriate For example, aggressive retaliation is less likely to be evoked if we infer that the person stepping on our toes did it accidently, rather than on purpose Similarly, actions which might be considered immoral are more likely to be condoned if they are a result of inability to act, rather than due to improper motivation For example, if a debt is not repaid because of lack of money, the person is judged immoral much less frequently than if the debt was not repaid because the lendee was unwilling to return the money (17) The distinction articulated by Heider (11) between 'can' (ability) and 'try' (motivation), which is central in any discussion of morality, also is pertinent to the evaluation of achievement actions Success at an achievement action could be attributed to special ability and/or unusual effort (or, at times, to some external factor such as luck) Similarly, failure could be attributed to a lack of ability and/or effort These disparate patterns of attribution have been shown to affect the evaluation of achievement activities

In a recent study we asked college students to reward and punish a hypothetical group of elementary school pupils (20) The subjects were told to imagine that the pupils had just completed an examination Three factors were conveyed to the subjects the pupils' ability (Yes or No), their expended effort (Yes or No), and their exam performance (Excellent, Good, Borderline, Moderate Failure, or Clear Failure) Reward or punishment was conveyed by means of 'stars' which could be placed on the student's paper gold stars were a reward, and red stars a punishment The amount of reward and punishment was constrained to 0-5 stars

The results of this study are illustrated in Figure 1 The figure shows

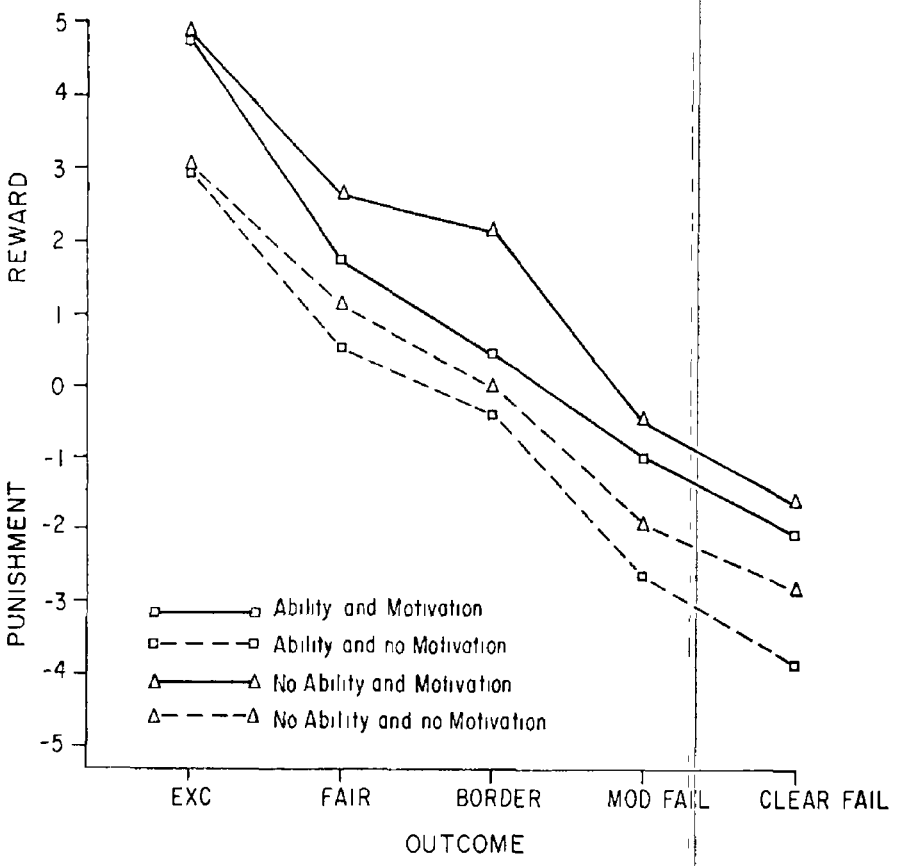

Fig 1 Evaluation (reward and punishment) as a function of pupil ability, motivation, and examination outcome

that all three of the main factors ability, motivation, and outcome, significantly influenced reward and punishment But they acted in diverse directions, that is, *low* ability and *high* motivation increased performance evaluation Figure 1 shows that given either high or low motivation, low ability students are rewarded more and punished less than high ability students Similarly, given either high or low ability, hypothetical students who expend effort are rewarded more and punished less than those who did not expend effort The best of all worlds is to succeed while having little ability but trying hard, the worst of all worlds is to fail while possessing ability but not trying This pattern of results conforms to what we intuitively believe to be the value of the American culture (and that of many other cultures, as well) We are especially likely to praise the person who has overcome handicaps to reach his goal, and we are especially harsh towards those who do not utilize their potentials and fail The latter condition is almost considered to be 'immoral'

In a subsequent study these results were replicated when student-teachers were the evaluators Further, a different group of student-teachers was asked to rate the amount of pride and shame they personally would feel in the various ability, effort, and outcome conditions (Evaluation in this case was based on a 10 point scale) The data from this study are shown in Figure 2 In Figure 2 it can be seen that the results are somewhat similar to those portrayed in Figure 1 Yet there also are some important differences between the two figures Personal pride given extreme success depends only on the amount of expended effort, ability apparently does not influence positive affect in extreme success situations Yet shame given failure is experienced most given the presence of ability expended effort is an important but secondary consideration

Further interesting findings emerge when the amount of reward and punishment which we dispense to others is directly compared to the amount of reported self-pride and shame (see Figure 3) Figure 3 shows that in all of the four hypothetical subgroups which have been introduced (ability and motivation, ability and no motivation, no ability and motivation, no ability and no motivation) we tend to experience more personal shame given failure than the amount of punishment which we administer Freud contended that the super-ego is a harsh master, this appears to be true even in achievement-related contexts I am always amazed at how guilt-ridden and incompetent some of our most productive scientists feel!

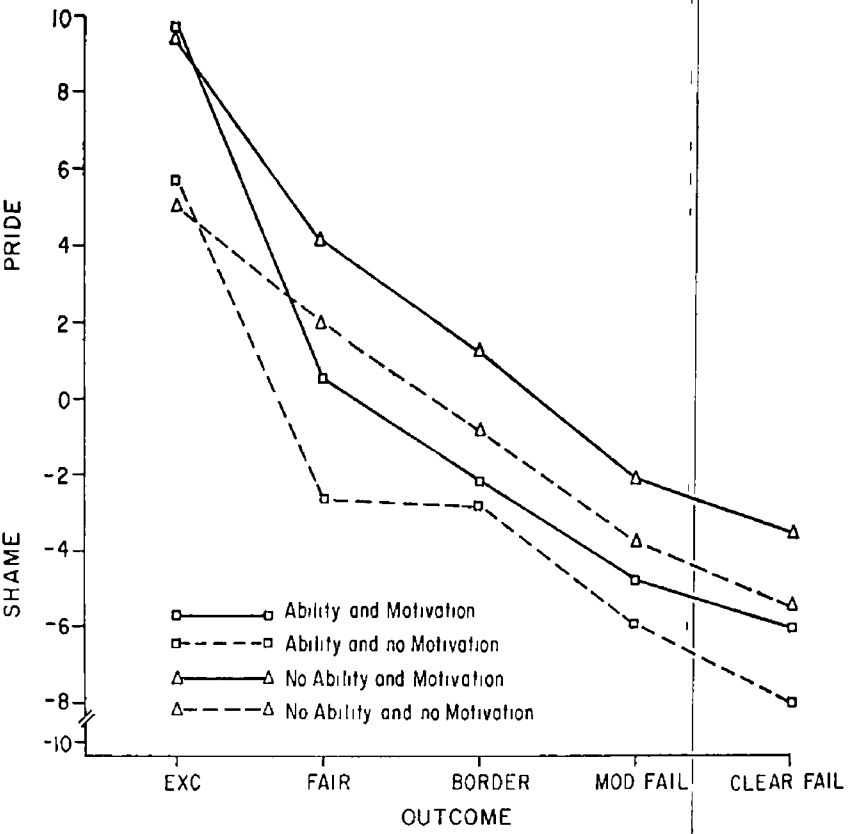

Fig 2 Pride and shame as a function of ability, motivation and examination outcome

It is therefore clear that the inferences we make about the causes of achievement can greatly influence both the amount of affect which we personally experience and our evaluation of the performance of others Of course, it is anticipated that these rewards and punishments can affect the subsequent likelihood of engaging in achievement-oriented actions In most situations we are not aware of the actual causes of an event, rather, we form judgments given certain pieces of information For example, if a student has failed many times in the past, and now succeeds, we are more likely to attribute his previous performances to a lack of effort, rather than to the absence of ability Thus, achievement evaluations involve complex decision-making processes, and the ability

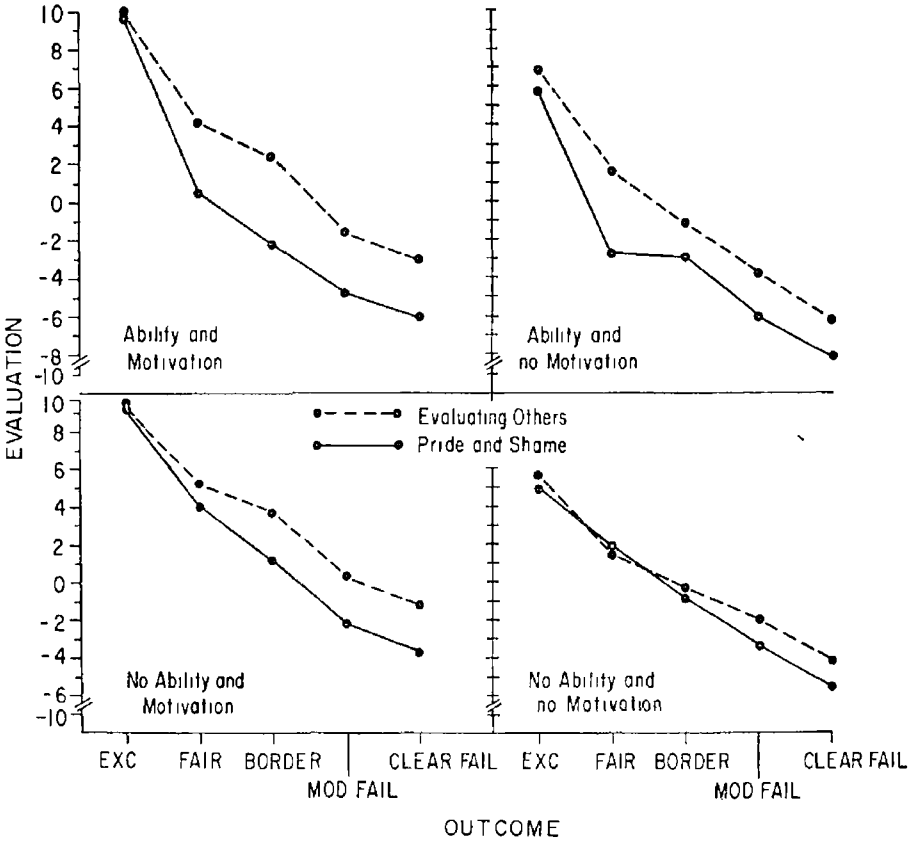

Fig 3 Comparisons of self and other evaluation within the four hypothetical ability and motivation groups

to sample and use a wealth of disparate, and perhaps somewhat contradictory, data

Some questions which then appear relevant are these What are the attributional inferences made by individuals high and low in achievement motivation? Do their perceptions of the causes of events differ? And, if so, might these thoughts mediate between their motive strength and subsequent behaviour? If so, then need for achievement might be considered as a complex cognitive system, in which attributions about causality play a central role

These questions also have been under study in our laboratory Valid instruments are available (7, 16) which assess whether a person takes personal responsibility for an outcome (internal locus of control, such as ability or effort), or attributes the results of an action to external factors (external locus of control, such as luck, or characteristics of the task or opponent) In a number of studies we have consistently found that individuals high in achievement motivation tend to attribute success to their own effort and/or ability more than individuals low in achievement motivation On the other hand, subjects low in achieve-

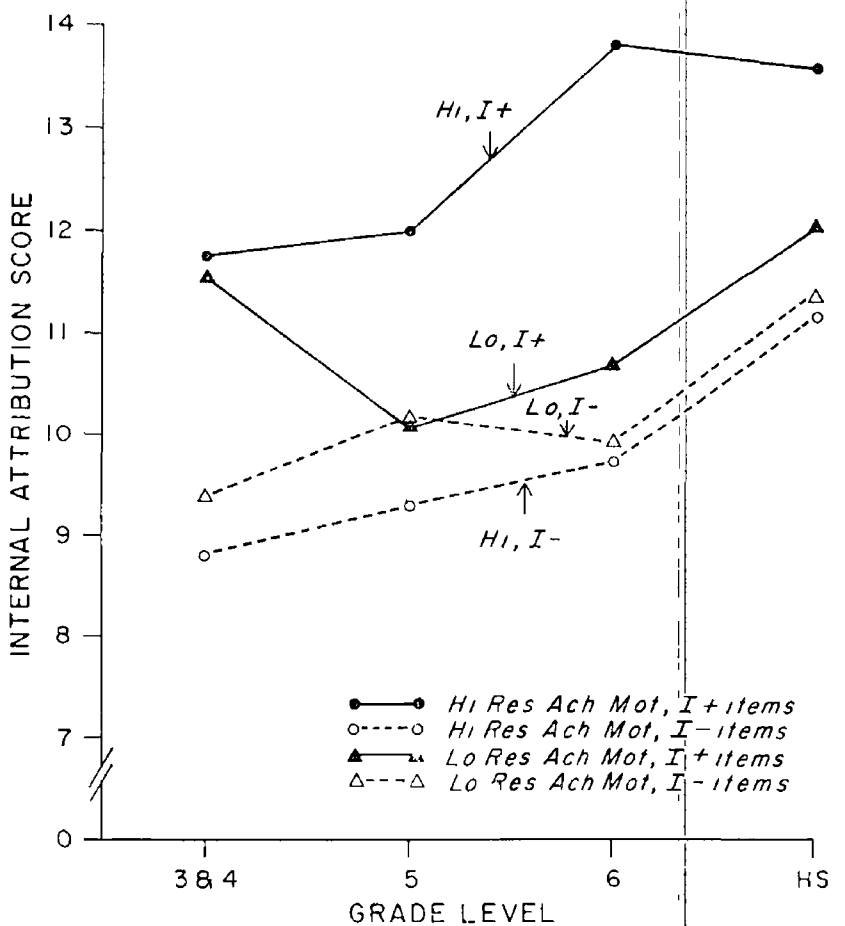

Fig 4 Mean internal attribution scores for positive (I+) and negative (I−) outcomes, with *Ss* classified according to resultant achievement motivation and grade level

ment-related needs are more likely to blame their low ability for failure than the highly achievement motivated group The results of one of these studies are shown in Figure 4 The figure represents the internal success attributions (I+) and internal failure attributions (I−) for the two motive groups across four different grade levels This sample is comprised of male students only

In more recent studies we have attempted to relate these intervening cognitions directly to action For example, in one investigation subjects were allowed to reward or punish themselves with poker chips while attempting to solve a number of achievement-related puzzle tasks They were free to reward or punish themselves by any amount which 'you feel you deserve' The results clearly indicated that systematic relationships exist between individual differences in achievement-related needs, perception of responsibility, and self reward for goal-attainment

CONCLUSION

I have attempted to convey some of the actions and thoughts which characterize achievement-related motivation It is clear that some understanding of the achievement system is being reached Yet a great deal of unanswered questions remain to be solved I hope that the ability and effort of the readers will aid in this endeavour

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