

THE DEVELOPMENT OF ACHIEVEMENT ORIENTATION

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## The Development of Achievement Orientation

Achievement orientation, conceptualized as a relatively stable personality trait, has been of great concern to researchers in both psychology and education. In its broadest conceptualization, achievement orientation is defined by 1) the presence of the motive, 2) the nature of the situation evoking the motive, and 3) the goal of the behavior. The motive is conceived as a desire to excel in reference to a standard of excellence; "The situations which evoke achievement behavior are those in which competence of performance is central... (and) the general aim of achievement behavior appears to be that of obtaining positive reinforcement for demonstrated competence." (Zigler & Child, 1969, p.545) Translating these criteria into behavioral terms, Crandall, Katkovsky and Preston (1960) define achievement behavior as "behavior directed toward the attainment of approval or the avoidance of disapproval for competence of performance in situations to which standards of excellence are relevant". (Zigler & Child, 1969, p. 545)

Various measures have been used to assess achievement motivation. Classically, the motive was defined by a person's score on a series of TAT pictures. (Atkinson, 1958) Other investigators have used paper and pencil achievement test scores, questionnaire type measures of achievement motivation, persistence behaviors, goal setting behaviors, achievement behaviors in contrived settings, grades and teacher ratings. While all these measures are probably measuring different aspects of achievement motivation and behavior, it will be assumed for purposes of this paper that they all represent, to some degree, a common underlying disposition: achievement orientation.

There have been two theoretical approaches to explaining the relationship between achievement motivation and achievement behaviors: Atkinson's expectancy

drive approach and a cognitive approach. Inherent in each of these conceptualizations are assumptions about the nature of the motive and about the developmental processes underlying the acquisition of both behaviors and motives. These assumptions have guided the research aimed at providing an understanding of the development of achievement orientation.

Atkinson and his associates have developed the most influential model of the relationship between achievement motivation and achieving behaviors. Atkinson (1957) specifies that "one's achieving behavior ( $T_A$ ) is a function of one's desire for success ( $M_S$ ) and fear of failure ( $M_{AF}$ ) as well as one's perceived probability of success and failure at the particular task ( $P_S$  and  $P_F$ , respectively) and the incentive or pride associated with success at the task ( $I_S$ ) and shame associated with failure ( $I_F$ ):

$$T_A = (M_S \times P_S \times I_S) - (M_{AF} \times P_F \times I_F)$$

A person with high achievement motivation, using the terminology of the model, is a person whose  $M_S$  is higher than his  $M_{AF}$ . People with low achievement motivation have the opposite pattern:  $M_{AF} > M_S$ ." (Frieze, 1972, p. 1-2) This model implies that both the nature of the situation and the motive structure of the individual are important determinants of behavior. The relationship between achievement motivation and behavior is assumed to be stable once achievement motivation has developed. This model conceives of achievement motivation ( $M_S$ ) as a stable driving force which emerges at five or six years of age and continues largely unchanged throughout adult life.

McClelland made several assumptions regarding the nature of the developmental processes responsible for the emergence of the achievement motive. These assumptions directed the major course of the early developmental research associated with Atkinson's model. Specifically, McClelland (1958) assumed that the motive was learned during the years prior to its final emergence and that antecedent socialization factors were related causally to the individual differences in

n-achievement. As a consequence of McClelland's assumptions, the research generated by this model focused on establishing the parental behaviors and attitudes which produce individual differences in the achievement motivation in children. The great bulk of the research to be reviewed in this paper falls into this tradition.

While Kagan and Moss (1962) and Veroff (1969) endorse Atkinson's model for adult achievement behavior, their work represents an alternative approach to the understanding of the development of achievement orientation. This approach is characterized by attempts to explain the development of behavior in terms of stages. Like Atkinson and his associates, Kagan and Moss "conceive of achievement and recognition behaviors as representing a stable underlying trait which persists throughout the childhood and adulthood of the individual...however, they believe that the underlying trait is expressed in differing ways as the child matures." (Freize, 1972, p.4). Thus, they are suggesting that the outlets for the motive ( $M_S$  or  $M_{AF}$ ) change over time and that these changes coincide with the developmental level of the child. Consequently, achieving behaviors ( $T_A$ ) also change over time. Veroff (1969) also suggests that achievement behaviors develop through stages. In contrast to Kagan and Moss (1962), he assumes that the nature of the motive also changes and that the adult motive ( $M_S$ ) is the result of childhood experiences in three major developmental stages. The strengths of the various components making up the adult motive structure ( $M_S$ ,  $M_{AF}$  and Fear of Success or  $M_{-S}$ ) are the result of differential experiences during one or more of these stages.

While Kagan and Moss and Veroff share the conception of achievement motivation as an effective drive system, the recent work of Heckhausen, Crandall, Weiner, and Feather has provided a new conceptualization of the links between achievement motivation and achievement behavior. Instead of postulating a

drive system as the force underlying achievement behaviors, they suggest instead that it is an individual's attribution regarding the causes of his success or failure "which mediates between the components in the achievement model and subsequent behavior". (Weiner, 1970, p.101). Data gathered by Weiner and his associates suggest that

"males in whom  $M_S \gg M_{AF}$  are more likely to attribute the cause of an event to internal (self) sources (ability and effort) than males in whom  $M_{AF} \gg M_S$ . On the other hand, males in whom  $M_{AF} \gg M_S$  are more prone to attribute success to task ease (an external factor) than the high achievement-oriented male subjects. Because individuals in whom  $M_S \gg M_{AF}$  tend to attribute success to themselves, they also should experience greater pride given goal attainment (Rotter, 1966). The inequality in the reward value of success between the two motive groups may account for the differential approach behavior which they exhibit. Conversely, it appears that subjects in whom  $M_{AF} \gg M_S$  are more likely than the  $M_S \gg M_{AF}$  subjects to attribute failure internally to a lack of ability. Thus, they may be more likely to avoid subsequent achievement-related tasks." (Weiner, 1970, p.101).

The developmental studies growing out of a cognitive approach are dependent on the researcher's theoretical biases. The developmental work of Crandall and her associates, growing out of the social learning theory of Rotter, focuses on parental antecedents of individual differences in cognitive functioning. While they postulate a cognitive link between motivation and behavior, their developmental approach still reflects a mechanistic bias. In contrast, the work of Heckhausen and Weiner reflects the influence of a cognitive-developmental theoretical approach. Rather than stressing the child rearing antecedents of individual differences, this cognitive approach seeks to identify the universal process of development. The child's cognitions, e.g., causal inferences, object interpretation and logical operations, rather than reinforcement and modeling, are seen as the causal factors in development. As

a result of this theoretical bias, research based on this approach has focused on documenting changes in the child's cognitive representation of achievement situations.

The purpose of this paper is to summarize the developmental theory linked to each of these three approaches: social learning, stage development and cognitive development and to review the research literature each has generated. Since no attempt has been made to compare the validity of these various approaches, each body of literature will be treated as an individual unit.

#### CHILD-REARING ANTECEDENTS OF ACHIEVEMENT ORIENTATION

Based on the assumptions that motives are learned rather than instinctual and that they are "acquired by association with primary biological pleasures and pain" (1961), McClelland hypothesized three variables as key factors in the development of achievement motivation: the "number of experiences in independent mastery, the age at which the training is given, and the emotional accompaniments of the training" (Winterbottom, 1958). Operationalizing these variables, Winterbottom investigated the relationship between maternal behaviors and achievement motivation in middle class boys between the ages of eight and ten. Using TAT scores as the criterion for classifying the 29 boys as having either high or low achievement motivation, she related n-achievement scores to several child-rearing variables: 1) the age at which mothers expected mastery of various independent and achievement behaviors of their sons, 2) the number of such behaviors they expected at each age, 3) the number of and ages at which mothers expected compliance with various restrictions on independence, 4) the type and quantity of reward and punishment given in response to these behaviors and 5) the mothers' estimation of their sons' abilities. She found that mothers of sons with high achievement motivation ( $M_S$ ) tended to have earlier expectations of independence and achievement in their sons, to make fewer but earlier

restrictive demands on their sons' behaviors, to make relatively more positive demands than restrictive demands on their sons' behavior throughout development, to reward them more often with physical affection for compliance with these expectations, and to have higher estimations of their sons' abilities even though the actual performance levels of both high and low  $M_S$  boys were equal.

These results suggest the potential importance of three areas of maternal behavior in the development of achievement motivation: 1) early independence and achievement training, 2) high estimation of the child's abilities and 3) reward (especially physical displays of approval) for behaviors that correspond to parental expectations.

#### Independence and achievement training:

##### Overt independence and achievement demands


Setting aside for the moment the question of early versus late demands for independence and achievement, a number of studies have focused on demonstrating the importance of independence demands per se for the development of high achievement orientation. Strodbeck (1958) reports a significant relationship between parental encouragement of autonomy and high need-achievement in adolescent sons. Similarly Kagan and Moss (1959) report that maternal concern with achievement during the first three years of the child's life related significantly to the need achievement (TAT) of daughters at 8, 11, and 14 years of age. However, the relationship did not hold for sons. Investigating the relationship between independence demands and achievement-related behaviors, Baumrind and Black (1967) found that maternal maturity demands and encouragement of independence correlated with assertive and competent behaviors in preschool boys. Similarly, Bee (1964) found that children who maintain attention on school related tasks have parents who provide their children with general strategies rather than specific instruction when they help their children solve problems. If one can assume that providing general procedures encourages children to



approach future tasks independently, then Bee's findings are additional support for the relationship between independence training and achievement orientation. In contrast, Winterbottom found no correlation between number of independence and achievement demands and the development of achievement motivation. Feld (1967) also found no correlation between maternal independence demands at adolescence and the achievement of adolescent boys. Likewise Smith (1969) found that neither maternal nor paternal endorsement of achievement or independence behaviors as child-rearing values correlated with need for achievement scores. Several studies using achievement behaviors as the dependent variable also failed to demonstrate a relationship between independence and achievement training and the expression of achievement behavior. Crandall, Preston, and Robson (1960) found no correlation between independence training and achievement behavior of preschoolers either at home or at nursery school. In a similar study, Crandall, Dewey, Katkovsky, and Preston (1964) failed to find any relation between either the value the parents saw in the children's achievement behaviors or parental instigation of their children's participation in achievement activities and grade school children's achievement behaviors. Likewise, a study by Solomon, Houlihan, Buss and Parelleus (1970) did not support the importance of independence and achievement training for the development of achievement behaviors in children. In this study, using a lower class black sample, maternal and paternal scores obtained by interview and by observational ratings made during a parent-child task interaction session were factor analyzed individually. The parental factor scores were correlated with their children's scores in behavioral and personality measures. Neither maternal nor paternal encouragement of independence or achievement efforts correlated with general academic achievement in the fifth grade sons. However, paternal encouragement did correlate with the academic achievement of the girls in this sample. Bartlett

and Smith (1966), using a methodology similar to Winterbottom's, found a negative relationship between the number of independence demands and the development of need achievement in elementary grade school boys.

#### Parental personality characteristic

Another group of studies have provided data relevant to this question. These studies have attempted to demonstrate a relationship between various parental characteristics conceptually linked with parental encouragement of independent behaviors and the achievement motivation and behaviors of their children. One such characteristic is dominance. Low father dominance has been found to relate to high need achievement in boys. (Bradburn, 1963; Maccoby, 1966; McClelland, 1961; Rosen & D'Andrade, 1959). Using achievement behavior as the dependent measure, Solomon et al., (1971) found a similar result for both boys and girls. However, when they used TAT n-achievement scores, they found no relationship between paternal dominance and n-achievement. The results for maternal dominance are less consistent. Rosen and D'Andrade (1959) report that sons with high n-achievement (TAT) have mothers who, relative to the mothers of low n-achievement boys, play a more active and dominating role when they interact with their sons in an experimental task. Drews and Teahan (1965) report that mothers of high achieving, gifted, junior high school students respond more dominantly on the Parent Attitude Survey. In contrast, Solomon et al. (1971) found a curvilinear (  ) relationship between maternal dominance and the achievement behaviors of children, especially boys. They found no relationship between maternal dominance and need-achievement, as measured by TAT protocols, for either boys or girls. Likewise, Shaw and Dutton (1962) report that mothers of underachieving girls have dominant child-rearing attitudes.

Another dimension of parental behavior that relates intuitively to the encouragement of independence is aloofness-nurturance. If one assumes that

ignoring children's requests for help would encourage their independent resolution of their problems while nurturing responses to these requests would encourage dependence, then these characteristics of parental behavior should relate to the development of achievement orientation. Drews and Teahan (1965) using maternal responses to a parents' attitude survey, found that mothers of high achieving junior high school students were more ignoring than mothers of low achieving students. Using the same scale Teahan (1963) found that both parents of high achieving college women were also, relatively more ignoring. Fathers of high achieving men in this study were lower in possessiveness.

Similarly, Crandall et al. (1960) reports that mothers who encourage achievement and independent behaviors in their preschool children are relatively less nurturant when their children seek help or emotional support. Crandall et al. (1964) found a similar relationship between academic competence in elementary school girls and low maternal nurturance. In contrast, Kagan and Moss (1962) report data indicating that maternal nurturing during childhood correlates positively with achievement in adult males. D'Heurle, Mellinger and Haggard (1959) also found that high achievement orientation in children is associated with parental overprotectiveness, if that protectiveness is coupled with pressures for achievement.

The permissiveness-restrictiveness dimension of child-rearing attitudes and practices should also relate the parents' support of independent behaviors in their children. Restrictiveness should correlate with the inhibition of independent behaviors. Kagan and Moss (1962) and Watson (1957) found that restrictiveness correlated negatively with achievement and independent behaviors in both males and females. In opposition to this, Maccoby (1961) found that boys whose parents were restrictive while they were preschoolers were high achievers in junior high school. Likewise, Drews and Teahan (1957)

report that mothers of high achieving junior high school students were more restrictive than mothers of low achievers.

Several studies using children's ratings of their parents' behaviors also investigated the relationship between restrictiveness and achievement behaviors. McClelland et al. (1953) found that college men with high n-achievement--as measured by TAT protocols--reported restrictive child-rearing practices. Similarly, Hoffman, Rosen and Lippitt (1960) found that academically competent boys see their parents as coercive. In contrast, Davids and Hainsworth (1966) found that underachieving high school males perceive their parents as restrictive. In a similar vein, McClelland et al. (1953) report a negative relationship between achievement motivation in high school boys and perceived parental restrictiveness.

#### Summary

In summary, sixteen studies report data supportive of the importance of independence pressures or facilitation on the development of achievement orientation; eight studies report no relationship; and eight studies report a negative relationship. The findings vary with respect to the sex of the parent, the sex and age of the child and the ethnic and socioeconomic status of the family. Few of these variations are systematic. Evidence does indicate that excessive paternal dominance has an inhibiting effect on the development of achievement orientation, especially for sons. Maternal dominance has a less consistent effect. However, excessive maternal nurturance has an inhibiting effect on the development of independence in both boys and girls. On the basis of the data presented no conclusions can be drawn on the impact of restrictiveness. Both Becker (1964) and Heilburn and Waters (1968) suggest that the influence of restrictiveness will be mediated by the supportive climate of the home. The data will be discussed in terms of this hypothesis in another section of

paper. Finally, the variations in the impact of parental behavior across the ages of the children (Davids and Hainsworth, 1966; Feld, 1966; McClelland, 1953) suggest that the optimal parental behaviors for the socialization of achievement orientation may change with the age of the child. Perhaps it is a family environment in which parents adjust their behavioral patterns to the physical, cognitive and emotional capacities of the child that is conducive to the development of achievement orientation. This hypothesis will be discussed further in relation to Veroff's suggestion that achievement motivation develops through stages rather than being established primarily in early childhood. Other methodological problems which make interpretations of these studies difficult will be discussed at the conclusion of this section.

#### Timing of independence and achievement demands

Winterbottom stressed the importance of early independence training for the development of high achievement motivation. The studies cited thus far have focused primarily on the role of independence per se rather than on the timing of this training. Several studies have reported data relevant to Winterbottom's hypothesis. Rosen (1959), in an attempt to extend Winterbottom's results across six ethnic groups and three social classes, was unable to replicate the importance of early independence and mastery training in either the upper or lower classes. Winterbottom's findings were replicated in his middle class, Protestant sample. Collard (as reported in Veroff, 1969) reports data indicating that earliness of achievement demands related to preschool achievement motivation only among middle class families and only for daughters. In contrast, lateness of achievement demands was the significant correlate of achievement motivation for middle class, preschool boys. Feld (1967) in a follow-up using Winterbottom's original sample, found that the mother's endorsement of early independence training was still predictive of the n-achievement, as measured

by TAT protocols, six years after the original study. Similarly, Kagan and Moss (1959) report that maternal concern with achievement during the first three years of a child's life is a significant correlate of the n-achievement of girls at 8, 11 and 14 years of age. However, the relationship does not hold for boys.

In direct opposition to Winterbottom's thesis, Chance (1961) found a correlation between late independence training and the development of high achievement. Likewise, McClelland (1961) reports cross cultural data indicating that in Brazil late demands correlate with n-achievement in boys. Similarly, in a Japanese sample, Hayashi and Yamaushi (1964) found that "mothers of low motivated preschool children make more demands than do mothers of highly motivated children. This relationship reverses itself after the age of 7". These results indicate that mothers of highly motivated children make latter demands than mothers of low motivated children. In a study using a revised version of Winterbottom's questionnaire for mothers and TAT protocols for the 8-10 year old boys, Bartlett and Smith (1966) found no correlation between boys' n-achievement scores and the timing of reported independence demands. Likewise, McClelland (1961) reports no correlation between n-achievement and early independence training in a sample of Japanese mothers and sons.

Data on the relationship between timing of independence demands and the development of anxiety over failure ( $M_{AF}$ ) presents just as confusing a picture. Feld (1967) found that teenage boys with high  $M_{AF}$ , as measured by the Mandler/Sarason test anxiety questionnaire, had mothers who made independence demands later than mothers of boys with low  $M_{AF}$ . Late demands were also related to high anxiety, using the Sarason test anxiety scale, in the study by Bartlett and Smith (1966). In contrast to these results, Teevan and McGhee (1972), using fear of failure scores based on TAT protocols, found that mothers who had

junior high school sons with high fear of failure had relatively early expectations for compliance with their independence and achievement demands. Smith (1969) found no significant relationship between age of demands and test anxiety.

In summaries of these conflicting results (McClelland, 1961; Moss & Kagan, 1961; and Smith, 1969) and in a theoretical model for the development of motives (Veroff, 1965), several investigators have proposed a curvilinear relationship between the timing of independence demands and the development of achievement orientation. McClelland (1961) suggests that the apparent contradictions can be resolved if the lateness or earliness of demands is defined in relation to an optimal age, i.e., 8 years of age. He presents data indicating that, in cultures in which the average age of demands is less than eight, late demands correlate with the development of n-achievement, while in cultures in which the average age of demands is more than eight, early demands correlate with the development of n-achievement. However, Bartlett and Smith (1966) did not find evidence of either a linear or a curvilinear relationship between age of demands and the development of n-achievement. Evidence with minority groups also does not support a curvilinear relationship (Bartlett & Smith, 1966; Smith, 1966). Clearly the conditions producing a curvilinear relationship need to be more carefully specified.

On the basis of longitudinal data, Moss and Kagan (1961) also argue that the impact of independence demands depends on the age of the child. They report that the correlation between maternal independence expectancies and the n-achievement of teenage sons varies with the age at which the expectancies were measured; the highest correlation occurs for accelerated maternal expectancies during the years 6-10. While this may reflect the closer relationship in time between the two measures--maternal expectancies and boys n-achievement scores--it is also possible that maternal demands during this period are particularly

crucial for the development of achievement motivation. Feld's (1965) finding that maternal independence demands during adolescence has no relation to teenage n-achievement scores adds some support to this notion. Additional support is provided in a study by Wolf (1938). She reports that high levels of persistence in young children is related to presences of adult demands that accurately reflect the abilities of the child. Low levels of persistence are associated with either unrealistic or insufficient demands. In summary a quote from Smith (1969) characterizes the theoretical position of both Veroff (1965) and Smith (1969). "The important factor in the development of achievement motivation may be parental sensitivity to the child's current stage of development, and the setting of demands that are challenging rather than too easy or too difficult." (page 137)

#### General Critique

In addition to the contradictory nature of the data, there are several additional problems which make interpretation of these studies difficult. First, the studies focus on different populations: varying in age, sex, and ethnic background. Even if it can be assumed that the measures of parental behavior are reliable across these groups, the few studies which have systematically varied these population differences have demonstrated that many specific parental behaviors have quite different implications for these various groups. (Grandall et al., 1960; 1964; Feld, 1965; Rosen, 1959; Rosen & D'Andrade, 1959; and Veroff, 1969). For example, a goal representing an early independence demand when applied to an eight-year-old might represent a limitation of freedom when applied to an adolescent.

A second major problem becomes evident when one considers whether the independent measures used are really tapping the same parental behaviors across various ethnic groups and for both mothers and fathers. Since many of



these measures categorize parent behavior relative to the sample in that study, it is difficult to say that the characteristics of a "dominant" father in study A or that the characteristics of a "dominant" mother in study A are the same as the characteristics of a "dominant" mother in study B. The scale devised by Winterbottom (and revised by other investigators) to measure the age at which independence demands were being made presents a similar problem. Number of demands made before the age of 8 was the criterion for distinguishing between mothers who made early demands from mothers who made late demands. No attention was paid to the particular items comprising a mother's total score. Several more recent studies have indicated that the total score may represent different underlying socialization attitudes depending on the items being endorsed. Rosen (1959) found that, when the items were subdivided into caretaking and achievement items, the lower class mothers endorsed more caretaking items at an earlier age than did middle class mothers. In light of the non-significant correlation between age of demands and n-achievement in the sons of lower class mothers, he concludes that early mastery training would influence the development of achievement motivation only if that training "reflected a real concern with the child's development of self-reliance and mastery and not if it reflected restrictiveness or rejection of the child". (McClelland, 1961). In contrast, Smith (1969) reports that the timing of caretaking demands and not independence demands correlates with n-achievement in elementary school boys. Torgoff (as reported in Smith, 1969) reports that a factor analysis of a revised Winterbottom questionnaire yields two relatively independent subscales: achievement and independence. Also using factor-analytic techniques, Smith (1969) demonstrated that parents systematically differentiate between three clusters of behaviors as potential goals of socialization: one group reflecting

independence behaviors and two groups reflecting achievement behaviors. However, parental endorsement of none of these clusters correlated with need achievement in their children.

Other studies, while not looking directly at Winterbottom's scale, have also indicated a need for distinguishing between achievement and independence demands. Crandall et al. (1960) reports that, while maternal support for achievement behaviors in the home are predictive of nursery-school achievement behavior, maternal pressures for independent behavior are not. In an observational study focusing on parental intervention into their son's performance on an achievement task, Rosen and D'Andrade (1959) found that parental intervention reflecting achievement pressures, i.e., setting high standards of excellence, are more common among parents of high need achievement sons than interventions reflecting independence pressures, i.e., insistence on self-reliance. Furthermore Child, Storm and Veroff (1958) report cross cultural data indicating that, in cultures characterized by indulgent child-rearing practices, need achievement is more related to the importance of achievement-oriented behaviors in adult life than to the pressures for independence during childhood.

A third problem arises because the studies have used several measures of achievement: TAT protocols, test anxiety scales, teacher ratings of independence, initiative, assertiveness, experimenter ratings of behavioral observations, achievement test scores, grades, and grades relative to IQ. Crandall et al. (1962), Smith (1969), and Solomon (1972) present data indicating little relationship between these various measures of achievement orientation. These findings make it difficult to compare the results based on these various measures. Similarly several measures of parental socialization practices were used: parental recall, parental report of current attitudes, observations of parental-

child interaction in an experimental setting and observations of parental-child interaction in the house. The reliability problems of each of these measures, makes comparison across measures extremely difficult.

Finally, the interpretation of these studies is made difficult because the causal relationship between the parental variables and the achievement behaviors of the children is impossible to specify. Bell (1968) argues that parental socialization practices may be a function of the existing abilities and disposition of the child as well as of the parent. Siss (1962) and Smith (1969) present data indicating the more intelligent children receive earlier independence training. Since IQ correlates significantly with achievement and with teacher's ratings (Crandall, et al., 1964), the child's IQ may be accounting for both the early independence training and the child's status on the various achievement dimensions. Further support is found in the study by Feld (1966). Based on finding the negative correlation between maternal independence demands over a six-year period, she suggests that early demands are a function of the child's disposition. As a result of the child's disposition, mothers of children not oriented toward achievement did not make early demands. By the time these children reach junior high, however, the mothers have become concerned with low achievement orientation and, consequently, place relatively more independence and achievement demands on their children.

In summary, the data neither support nor refute Winterbottom's hypothesis regarding the role of early independence and achievement training. In addition to the results of the numerous studies being inconsistent, methodological problems make interpretation and generalization impossible.

#### Parental belief in the child's competence

Winterbottom (1958) reports that mothers of high n-achievement sons have higher estimations of their sons' abilities than do mothers of low n-achievement sons, despite the absence of objective differences in performance level.

Based on this finding, she concludes that high estimations of one's child's abilities is important for the development of achievement motivation. In support of Winterbottom's hypothesis, Rosen and D'Andrade (1959) report that parents of high n-achievement, as compared to parents of low n-achievement boys, have higher achievement expectations, higher career and higher academic aspirations and set higher standards for their sons. Likewise, McClelland (1961), reporting on the results of a cross cultural study, concludes that mothers of high n-achievement sons in both Japan and Germany have higher occupational aspiration for their sons. Smith (1969) also reports a relationship between high parental estimation of their sons' competence and high n-achievement in boys. Using a more sociological approach relating demographic variables, child rearing attitudes and n-achievement, Rosen (1959) demonstrated that in cultural groups that foster the development of n-achievement, i.e., Irish and Protestant, parents have higher career aspirations for and higher ability estimations of their sons than parents from other cultural groups.

Results suggest that parental estimations of their children's abilities are also related to achievement behavior. Using grade school achievement as the dependent measure, Crandall et al. (1964) reports a positive relationship between maternal evaluation of competence and high academic achievement in elementary school daughters. However, the same relationship did not exist between parents' estimations and the academic achievements of sons of the same age. In contrast, Wyer (1965) found a positive relationship between level of parental acceptance of their child's competence and the academic achievement for boys and not girls attending college. However, the discrepancy between the evaluation of the two parents was found to be debilitating for both boys and girls. Finally, in a study of fifth and sixth grade Black boys Katz (1969) demonstrates that fathers of low achieving boys both rated their sons

less favorably and were perceived as less accepting by their sons than fathers of high achieving boys.

In summary, evidence to date supports Winterbottom's suggestion. Confidence in one's sons or daughter's abilities, coupled with high expectation for their success, are important factors in the development of achievement orientation. However, whether these factors play a role which is either directly causal or simply facilitory has not been established.

#### Physical affection and other rewards for achievement

Winterbottom included a number of variables aimed at establishing a picture of maternal reaction to compliance with demands and restrictions. Her results indicate that mothers with high n-achievement sons, as compared to the mothers with low n-achievement sons, report rewarding compliance with independence and achievement demands more, especially with demonstration of physical affection. There were no significant differences in the reported punitive responses for either unfulfilled demands or non-compliance with restrictions and in the reported positive responses for compliance with restrictions. On the basis of these results, she concludes that reinforcement for independent and achieving behaviors is important for the development of n-achievement. Recent studies have, by and large, confirmed this conclusion. McClelland (1961) reports a consistent though low (p. 20) relationship between maternal physical reinforcement and n-achievement across three cultures. In another cross cultural study, Child, Storm and Veroff (1958) report that positive reward for achievement behavior exists in cultures with high levels of n-achievement as assessed by folk tale analysis. On the basis of observational and behavioral data, Crandall et al. (1960) conclude that, although the general level of maternal affection does not correlate with nursery school achievement, specific maternal reinforcements for achievement behaviors do. Reporting on a study using older children (grades 1-3), Crandall (1963) concludes that both maternal and paternal

reinforcement for participation in intellectual activities are important correlates of the intellectual achievement strivings of girls. However, the relationship does not hold for the boys. "On the other hand, when the children's athletic-achievement activities were assessed, significant relations were found for both boys and girls and primarily along same-sex, parent-child lines" (Crandall, p. 429). In a similar study also using an early grade school sample, Crandall et al. (1964) report a similar relationship between paternal reinforcement and achievement behaviors of daughters. As in the previous study, the relationship did not hold for sons. On the basis of observational ratings of parent-child interactions on achievement tasks, Rosen and D'Andrade (1959) conclude that mothers of sons with high achievement motivation give more approval for successful performances than mothers of boys with low need achievement.

Zigler and Child (1969) report on two early studies which demonstrate the importance of direct achievement training in increasing the frequency of achievement behaviors in children. In both studies (Keister, 1937; and Zales, 1937) achievement behaviors of nursery school children were significantly increased by use of specific praise. Specifically, Zales demonstrated that praise for specific behavior and training in essential skills increased the frequency with which children attempted to take off or put on their coats without assistance. Keister demonstrated that training involving specific praise and mild reproof for non-persistence increased the persistence of children on new tasks.

Grey and Klaus (1968) suggest that the presence or absence of direct reinforcement for achievement behaviors might be one cause for social class differences in achievement motivation. Through careful observation of the environment of the lower class child, they note that the child gets less specific reinforcement than the middle class child and the reinforcement he

gets is generally for caretaking behaviors rather than achievement behaviors.

In contrast to these results, the high n-achievement boys in one study (Bartlett & Smith, 1966) received no more physical approval from their mothers than did the low n-achievement boys. Instead the mothers of low n-achievement boys checked "Tell him how much I love him" as a response to success more often than did mothers of high need achievement boys. Bartlett and Smith (1966) suggest as an explanation that this response may represent a conditional love interaction pattern, and, as such may produce high anxiety and, as a result, low need achievement.

Winterbottom's data also suggest that maternal reaction to unfulfilled achievement expectation is not a significant correlate of n-achievement in boys. Several studies have investigated this result further. Both the studies by Rosen and D'Andrade (1959) and Bartlett and Smith (1966) indicate that mothers of high n-achievement boys respond critically to their sons' failures in meeting their expectancies. In contrast Crandall et al. (1964) report that academically proficient girls had fathers who did not criticize their failures. Finally, Teevan and McGhee (1972) in a study investigating the correlates of fear of failure in junior high school boys, found that mothers of high fear of failure boys reported responding relatively more punitively to unsatisfactory behavior and relatively less rewarding for satisfactory behavior than did mothers of low fear of failure boys.

In conclusion, positive reinforcement for achievement behaviors appears to be an important correlate of achievement motivation. Few studies have attempted to investigate whether mothers of high need achievement children are differentially reinforcing achievement or are simply more rewarding and more involved as compared to mothers across all situations. This issue will be discussed in more detail in the general conclusions. Data dealing with the role of responses to unsatisfactory behaviors are inconclusive.

## GENERAL CONCLUSIONS OF THE ROLE OF CHILD-REARING PRACTICES

Evidence regarding the role of early demands is inconclusive. The importance of high evaluation, high expectations, and positive responses for satisfactory behaviors receives more support. Of the three discussed correlates of the development of achievement orientation, the age at which demands are made and the number of demands made by parents represents the most active intervention process on the part of the parents. While reinforcements and expectations are affirmative actions, it is unclear whether these responses are directed differentially at achievement behaviors or are part of a general pattern of parent-child relationships which typify the home environment of high need achievers. If, as the data Becker (1964) reviews indicate, there is a cross-situational generality in parental behaviors, then it is reasonable to expect that the positive parental behaviors reported in achievement studies are merely a sampling of the general patterns of interactional behaviors in the family. That is, it is reasonable to expect that homes in which both physical and verbal rewards are the typical response to achievement patterns are probably characterized, in general, by warm and affectionate interaction patterns.

### General affective climate

In a theoretical paper on motive acquisition, Veroff (1965) suggests that it is a warm, affectionate environment which will be conducive to the development of maximal strength and generality of the achievement motive. Numerous studies provide data relevant to his suggestion. Crandall (1963) reports on several studies which suggest that "positive parent-child relations (such as closeness to the child, high interest, understanding and/or approval of him, etc.) are conducive to competent academic achievement" (Crandall, 1963, p. 430). While he criticizes these studies for methodological problems, several more recent studies also support the importance of a warm home environment for the



development of achievement motivation, Becker (1964), in his summary of the Kagan and Moss (1962) study, notes that harsh child rearing practices, as compared to warm and supportive practices, during the first three years of a child's life are associated with lower mastery behavior, dominance, independence and competitive behaviors. Similarly Brofenbrenner (1961) reported on data indicating that parental rejection, neglect and hostility are correlates of low leadership in adolescent children of both sexes. Katz (1967), in a study using fifth and sixth grade Black boys, reports that low achieving boys perceive their parents, especially their fathers, as less interested in them than high achieving boys rated their parents. Likewise, Chance (1961), in her report of a study of Kurtz and Swenson, indicates that warm relations with both parents is related to children's over-achievement. Using a different approach to measuring the geniality of the home environment, Kramer and Flemin (1966) present data suggesting that homes relatively free of parental conflict in child-rearing attitudes provide an atmosphere conducive to the development of high academic achievement. They classified 290 fourth, fifth, and sixth grade children on the basis of the disagreement between their parents' responses to a child rearing attitude questionnaire. They found that children, especially boys, whose parents had low disagreement scores had higher IQ and reading scores. Wyer (1965) also presents data suggesting that parental disagreement has a negative effect on the development of achievement behaviors. In his study, discrepancy between parental ratings of their children's abilities related negatively to the academic effectiveness of both college men and women. Solomon et al. (1971) also report on data supportive of the importance of a warm parent-child interaction pattern. They conclude that maternal warmth and paternal encouragement is important for the development of achievement behaviors for both boys and girls and that paternal geniality relates positively to the

TAT n-achievement scores of girls.

In contrast to these studies, several studies have indicated that more negative parental behaviors, such as rejection, coerciveness and/or over-protectiveness, are related to high achievement. In a study by Crandall et al. (1964) it was found that academic competence in elementary school girls correlates with low maternal nurturance and affection. However, this negative relationship did not hold for fathers' relationships with their daughters or with mothers' relationships with their sons. Crandall et al. (1960), while not finding a significant negative relationship, found no support for a relationship between general affection or nurturance and the achievement behaviors in children.

In a study reviewed earlier, data gathered by Drews and Teahan (1965) suggest that the association between positive parent-child interaction patterns and achievement behaviors in children may not be a simple, linear relationship. While permissiveness as an independent variable is not equal to warmth, several studies reviewed earlier also suggest that the relationship between an affectionate, warm environment and the development of achievement orientation needs further evaluation. Several findings reported by Solomon et al. (1971) are particularly relevant to this re-evaluation. These investigators tested for quadratic as well as linear relationships between parental variables and measures of childhood achievement. Their finding that many of the significant relationships were, in fact, curvilinear suggests that there may be an optimal level of parental warmth and permissiveness that is conducive to the development of achievement motivation. Excessive permissiveness and warmth may be indicative of overprotection and reinforcement for dependent behavior

patterns<sup>1</sup> which are incompatible with the expression of achievement orientation,

<sup>1</sup>Whether these dependency behaviors represent the polar opposite of achievement behaviors or whether their reinforcement and subsequent performance block the opportunity for the child to develop independent behavior patterns is a separate issue which won't be addressed in this paper.

possibly through either the reinforcement of submissive behaviors or the fostering of high levels of test anxiety and fear of failure.

Some of the discrepancies between the results of various studies may be an indirect result of these curvilinear relationships. In each study, the parents are defined as permissive, restrictive, dominant, warm, etc. in comparison with the other parents' responses on that particular questionnaire. What is being labeled as "ignoring" in one study (Drews & Teahan, 1965) may actually represent behaviors occupying a central position along the permissive-restrictive dimension. As another example, several studies (Crandall et al., 1960; 1964; Rosen & D'Andrade, 1959) indicate that achievement motivation is correlated with "more" dominance may, in fact, represent a central position on the continuum between restrictive and permissive behavior. Likewise, "less" dominance in fathers may occupy a similar position.

#### Interaction of parental variables

It is unlikely that dimensions of parental behaviors exist in isolation of each other. Fluctuations in uncontrolled variables may partially account for some of the inconsistency in findings on the influence of various parental behavior measures. In his review of the effects of different discipline techniques, Becker (1964) suggests that the influence of behavior along the permissive-restrictive dimension is dependent on the warmth or hostility that accompanies these behaviors.

In the studies which considered the influence of two parental patterns simultaneously, the results support Becker's hypothesis. In a study specifically designed to study the interaction between restrictiveness and warmth, Heilburn and Waters (1968) demonstrate that the effects of perceived authoritarian control in college males are influenced by the degree of perceived

maternal warmth. There was higher incidence of underachievement in subjects who reported high control coupled with low warmth and a higher incidence of overachievement in subjects who reported high control coupled with high warmth. There was a lower incidence of both over and underachievers among subjects reporting low control coupled with either high or low warmth. Using younger children, D'Heurle, Melinger and Haggard (1959) report a similar finding. They found that high achievement was associated with a pattern of parental pressures for achievement coupled with protectiveness. In her concluding remarks on this and other studies, Chance (1961) notes that the effect of maternal demands on the child's behavior may depend on the warmth of her relationship with the child.

Data presented by Teevan and McGhee (1972) can also be interpreted in accord with Becker's hypothesis. In their study, junior high school boys with high fear of failure had mothers who both punished them for unsatisfactory behavior and did not respond to their satisfactory behaviors. This response pattern may be representative of the high restrictive, low warmth combination that other researchers have indicated is associated with low achievement orientation.

#### Effect of an adequate role model

Despite the importance of a generally positive relationship between parent and child, it is probably not a sufficient condition for development of achievement orientation. While Levin (1958) and Becker (1963) suggest that positive parental practices maximize the degree of adult role modeling in children, the particular roles they adopt will depend on the models available. The importance of the models available to children is emphasized by Kohlberg (1966). In his discussion of role modeling, Kohlberg suggests that children, in their efforts to structure their experience and to synthesize a social role for themselves,

use generalization based on perceived parental behaviors to define appropriate role behaviors.

If perceived parental behaviors are important, then the achievement orientation of the parent--in so far as it is visible to the child--should influence the developmental course of achievement motivation and behavior. Father's occupation provides the child with one cue as to the importance of academic competence. In reviewing Kahl's book, The American Class Structure, Crandall (1963) reports that, while father's occupation did not relate to school performance in the early grades, it becomes a better predictor of boys' academic performance than IQ by the time the boys were in junior high school. The increasing correlation between academic performance and father's occupation suggests that social rather than biological factors are responsible for the relationship. It seems likely that some boys conclude that academic achievement is not a crucial part of their father's role and therefore need not be a significant aspect of their own role.

Parental participation with the child in intellectual activities provides another opportunity for the child to observe his/her parents' achievement-related behaviors. In a study investigating the possibility that parental achievement orientation would influence their interactions with their children in achievement situation, Katkotsky, Crandall and Preston (1964), report that the greater the value fathers or mothers placed on their own intellectual competence, the more likely they were to join their grade school aged children in intellectual activities. To the extent that the parents, during these interactions, model competent achievement behaviors, the child will incorporate achievement behaviors into his/her role concept.

#### Impact of role conception: sex differences in achievement orientation

The impact of role concept developed through exposure to various models may

be a key factor in the differential correlates of achievement motivation in the two sexes. As noted earlier, the parental behaviors that correlate with need achievement differ with respect to the sex of the parent and the sex of the child. Consequently it has been suggested (Maccoby, 1966) that cross-sex parent-child relations are particularly important in development of achievement. An alternative explanation based on the importance of same-sexed role models seems equally plausible. The model of the development of achievement-orientation presented thus far suggests that achievement orientation is associated with both a competent role model and a warm home environment. A high achievement orientation in the same sexed parent provides the child with cues indicating that achievement behaviors are appropriate sex-role behaviors, while a warm encouraging relationship with both parents allows these behaviors to become part of the child's repertoire. For boys, this model would predict that the high achievement orientation should be associated with the presence of a nonauthoritative, competent, achieving father and a mother who provides an optimal level of support as well as encouragement of independent behaviors. Data (Rosen & D'Andrade, 1958) confirm this prediction.

In contrast, for girls the model would predict that high achievement orientation should be associated with the presence of a nonauthoritarian, competent, achieving mother and a father who provides an optimal level of support and encourages achievement behaviors. While there is no evidence which directly tests this prediction, there are data (Crandall, et al., 1960; 1964; Chance, 1961; and Maccoby, 1966) that can be interpreted as providing suggestive support. Crandall and his associates have demonstrated that achievement behavior in girls is correlated with less nurturant maternal behaviors and supportive and instigative paternal behaviors. Data reported by Chance (1961) and Maccoby (1966) also support the importance of a nonauthoritarian,

competent female role model for girls. Both investigators report that excessive maternal intrusion and control is negatively related to the academic achievement of girls. To the extent that less nurturant and less intrusive maternal behaviors may be a reflection of greater concern of the mother with her own competence, it is possible that these mothers are providing their daughters with a more competent and, consequently, less stereotypical feminine role model than mothers who exhibit more nurturant behavior patterns.

To the extent that competence and instrumentality are assumed to be masculine traits (Boverman et al., 1972) and to the extent that achieving daughters are modeling competent and instrumental mothers then it is reasonable to expect that achievement in women will also correlate with a higher score on masculinity scales. Maccoby (1966) reviews several studies which indicate that masculinity is, indeed, a correlate of intellectual competence in girls and women. Likewise, Milton (1957) reports that masculinity is related to superior problem-solving ability in girls.

The importance of sex-role concept on the development of achievement behaviors in women is demonstrated dramatically by data gathered by Shaw and McQuen (1960). They report that high school underachievement in women does not become apparent until the onset of puberty while high school underachievement in boys can be predicted on the basis of grade school performance. At puberty girls become caught up in a "double bind". They wish to conform

to their parents' and teachers' expectations of good academic performance, but fear that high academic achievement will make them unpopular with boys. As a result of these dual pressures, Coleman suggests, the brightest girls do creditably in school but less than their best. On the other hand, the brightest boys feel free to excel in scholarship and do so in fact....This contrast in behavior is (an) ...indication that the achievement drop-off among girls as they reach maturity is linked to the adult female sex role."

This conclusion is also supported by Kagan and Moss (1962). On the basis of

data gathered in their longitudinal investigation of behavior, they conclude that the sex-role appropriateness of behavior is a key factor in determining its persistence across time.

#### Parental expectations for high achievement

Thus far, it has been suggested that the development of achievement orientation is related to both the general emotional demands of the home and the availability of competent role models. Winterbottom's data and data gathered in subsequent studies point to the importance of one other factor: parents' assessment of their children's abilities. Like the previous two correlates, this variable probably also represents a general attitude rather than a factor specifically related to achievement orientation. Parental assessments of their children's abilities probably reflect a more general of confidence in the child's ability to cope successfully with situations and to meet the expectations of his/her parents. More specifically, this constellation of parental attitudes would include setting high but realistic goals for children (Rosen and D'Andrade, 1958; Rosen, 1959), having high estimations of their children's abilities (Winterbottom, 1958), assuming children will conform to expectations and expecting the child to become a high achiever.

Rosenthal's work (1968) on experimenter effects highlights the importance of expectancy. In one of his studies, teachers were given false information regarding the ability levels of their children. Despite equal ability levels in reality, the performance levels of the students corresponded to the teachers' expectations. If teachers' expectations can have this much impact on the performance level of students, then the expectation of parents should have even more marked effects on the behavior of their children. Consequently, children whose parents expect them to be high achievers will probably behave accordingly.

Socioeconomic class differences in achievement motivation (McClelland, 1961;



Rosen, 1959a; Rosen, 1959b; and Solomon, et al., 1971) may reflect, to some extent, differences in parental expectations. Based on observations of parent-child interaction, both Zunich (1961) and Rosen and D'Andrade (1959) report that middle class mothers provide more constructive help for their children in achievement tasks than lower class mothers. While there are a variety of plausible explanations of this differential interaction pattern, it is possible that constructive suggestions reflect a belief in the child's ability to make use of these suggestions in succeeding at a task, while non-intervention or over-control reflects a lack of belief in the child's ability to cope with the situation.

In addition to expectancies regarding the child's abilities, parental expectancies may influence the child's interpretation of the school environment. Data reviewed by Clausen and Williams (1963) are relevant to this suggestion. They report that, while lower class mothers stress neatness and obedience, middle class mothers stress development of self control. Each of these maternal socialization goals reflects a different attitude as to "appropriate" behaviors and as to the abilities of the child. Children may relate to the school situation in accord with these attitudes. That is, lower class children may respond to school as a social situation in which neatness and obedience are the evaluative behaviors while middle class children will relate to grade school as an achievement setting.

Lowered parental expectancies may also account for some of the reported sex differences in achievement orientation. It is obvious in our culture that parents do not hold as high achievement aspirations for their daughters as they do for their sons. This alone may account for some of the achievement differences. While no studies have documented differential assessments of ability based on the sex of the child, there are data indicating that performances

by females are underrated. Goldberg (1968) demonstrates that judges consistently rate articles lower when the author is female, despite the fact that the papers differ only in the sex of the author. Similarly, Wylie (1963) finds that junior high school students consistently underrate the scholastic ability of girls. Females also underrate their own abilities. Crandall et al. (1962) report that, while there is a positive relationship between IQ and expected performance in boys, there is a significant negative relationship in girls. Similarly, Sears (1963) reports a positive correlation between IQ and appraisal of one's own abilities for boys and no correlation between these variables for girls. Crandall (1969) also reports several studies indicating that girls have lower estimates of their capabilities. It seems that girls with ability are failing to develop the sense of confidence that is found in high achieving boys. While there is not evidence directly linking parental attitudes to this phenomenon, it seems likely that parents, through subtle cues, are not convincing their daughters that they (the parents) have confidence in the child's ability to master achievement situations.

### Summary

In summary, the child-rearing antecedents that relate to the presence or absence of achievement orientation fall into three rather global areas: the general affective climate of the home, the availability of competent role models, and confidence that the child will, in fact, develop into an achievement oriented individual. How these antecedents affect the development of achievement motivation is unclear.

Based on the belief that children actively structure their own experiences and that, as a consequence of the child's restructuring processes and as a consequence of parental inconsistencies, direct parental control is not as powerful a socialization mechanism as sometimes believed, I suggest three

conclusions. First, these child-rearing variables probably operate on a molar rather than a molecular level. That is, the specific variables which have been related to n-achievement or to achievement behaviors are representative of a more general home environment that is conducive to the development of culturally acceptable characteristics rather than of training procedures linked to the acquisition of specific behaviors. In support of this argument, data suggest that these variables are also associated with the development of other positively valued traits: a belief in internal control (Chance, 1965; and Katkovsky, Crandall & Good, 1967); high self-esteem (Dreyer & Haupt, 1966); acceptance of responsibility for and feelings of guilt over transgressions (Becker, 1964); initiative, spontaneity, creativity and originality (Watson, 1957); and leadership (Bronfenbrenner, 1961).

Second, these child-rearing variables probably operate in combination with each other. That is, the development of high need achievement is probably dependent on the presence of all three variables. Katkovsky et al., (1964) provide data that can be interpreted as supportive evidence for this hypothesis. They report that fathers and mothers who value their intellectual competence also "participate with their elementary-school-age children in intellectual pursuits, instigate their children toward intellectual achievement activities and accomplishments and react strongly to their children's achievement efforts". (Crandall, 1963, p.427). These results suggest that all three child-rearing variables are usually present in high achievement oriented families. Data reported by Rosen (1959a & 1959b) suggest that several variables are necessary for the development of high n-achievement. In two studies designed to test the relationship of n-achievement to several child-rearing and several demographic variables, he found that predictions based on the influence of each individual variable were confirmed only in limited sections of the sample. The various significant interactions suggest that the influence of

one variable is dependent on the levels of the variables which interact with it. Consequently, it can be inferred that the development of achievement orientation is related to a constellation of behaviors rather than to the impact of variables operating independently of each other.

As additional evidence, several studies have reported data indicating a higher incidence of achievement orientation among first borns and only children than among latter borns (Bartlett & Smith, 1966; Rosen, 1959b; and Sampson, & Hancock 1967). However, attempts to specify the cause of this phenomenon have been unsuccessful. It seems likely that there is a unique combination of parent-child interaction patterns that is characteristic of families with only one child and that this environment is also conducive to the development of achievement orientation.

Third, the relationship between the antecedent variables and the development of achievement orientation reflect an interactive rather than causal process. That is, the development of achievement is dependent both on the parents' behaviors and on the child's interpretation and interaction with these behaviors. Both the data suggesting the importance of timing demands to correspond to the child's abilities and dispositions (Feld, 1966; Kagan & Moss, 1962; McClelland, 1961; Veroff, 1965; and Smith, 1969) and the data suggesting the importance of the child's perception of sex-role appropriate behaviors (Kagan & Moss, 1962; and Maccoby, 1966) indicate that the child's abilities, perceptions and cognitive processes must be considered if the acquisition of achievement orientation is to be fully understood. In addition, the correlation between the child's IQ score and the age at which demands are made indicates that parents are, to some extent, responding to the abilities of their children. Effective parenting may, in fact, depend on the ability of parents to gear their demands and expectations to the needs, abilities and

dispositions of the child as he/she grows to adulthood.

Essentially, I am proposing a multivariate model of the relationship between antecedent child-rearing variables and the development of achievement orientation. That is, the development of achievement orientation probably depends on the presence of several variables operating in interaction with each other. Specifically, proper timing of demands creates a situation in which the child can develop his/her sense of competence in dealing with his environment. An optimally warm and supportive environment creates a situation in which the child will choose his parents as role models. The presence of high yet realistic expectations creates a demand situation in which the child will perform in accord with the expectancies of the parents. Finally, the ability level of the child must be such that attainment of the expected level of performance is within his/her capacity. All these factors, as well as the availability of appropriate role models, are essential for the child to develop a positive, achievement orientation. However, until recently, statistical methodology has limited our ability to test multivariate hypotheses. Consequently, most of the research reviewed in this paper has not provided an adequate test of the hypotheses. Validation of these hypotheses will depend on research designed to investigate multivariate relationships.

#### STAGE APPROACHES TO THE DEVELOPMENT OF ACHIEVEMENT ORIENTATION

In his discussion of the stability of behaviors, Kagan (1969) makes a useful distinction between genotypic and phenotypic continuity. According to Kagan, genotypic continuity occurs when the psychological processes underlying behavior remain the same while the overt behavior changes. In contrast, phenotypic continuity occurs when "the topography of the behavior remains stable, but the response is issued in the service of different motives, standards,

expectancies or sources of anxiety". Applying the concept of genotypic continuity to the understanding of the development of achievement orientation, Kagan and Moss (1962) suggest that the motive underlying achievement behaviors remains the same while the overt behaviors expressive of this motive pass through three primary stages. "Thus what is ultimately seen as adult achievement behaviors is expressed as involvement with task mastery from 3 to 6 years of age, as a desire for recognition and competitiveness at ages 6 to 10 and as intellectual achievement behavior from 10 to 14." As support for this hypothesis, they report both a significant correlation between these various behaviors as the children in their longitudinal sample pass through the appropriate ages and a significant correlation of need achievement scores (TAT) across a six year span.

#### Veroff' stage model

Veroff suggests a similar sequence of behaviors. However, in his conceptualization, the motives underlying these behaviors also change. He proposes the existence of two basic types of achievement motivation: autonomous and social comparison. The relative dominance of these two motives defines each of the three stages. "A theory of how these motivations develop suggests that autonomous achievement motivation occurs initially followed by social comparison motivation if autonomy is mastered. Both autonomous and social comparison motivations for achievement can be active in people if, in turn, the social comparison motivations for achievement is mastered." Failure to master either motive will result in low integrated achievement motive ( $M_S$ ), fear of success, or fear of failure. Table 1 summarizes the problems resulting from the failure to master each motive system.

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Insert Table 1  
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According to Veroff successful mastery of each stage depends on appropriate experiences during each stage. He suggests that the cultural experiences for successful mastery of autonomous motivation are "the freedom of access to (the) environment, sufficient exposure to stimulation requiring autonomous mastery, and sufficient support for autonomous action." As other investigators have suggested, Veroff postulates that the key to these experiences rests on the parents' ability to time demands appropriately so that the child is provided with tasks that he/she "cannot accomplish without effort, but can accomplish with persistent striving". Data reviewed earlier support the importance of these experiences.

His suggestion regarding the appropriate experiences for mastery of the social comparison motive and for the successful integration of the autonomous social comparison motive are quite vague. Consequently, the data he present as supportive evidence are difficult to interpret.

As a result of changes in the child's motive structure, the child's achievement concerns and behaviors also change. During preschool years autonomous achievement motivation is most salient. Consequently, the child is concerned with task mastery and with control of his environment. When the child enters school, and if he has mastered autonomous achievement motivation, the social comparison achievement motivation emerges. At this time, success becomes a relative phenomenon and the child becomes competitive. This stage continues until adolescence, at which time an integration of the two motives occurs. A successful integration of the autonomous and the social comparison implies the use of social comparison as one source of information when absolute standards of excellence are not available.

To test his hypotheses regarding these developmental changes, Veroff used five measures of achievement motivation: (1) a risk-taking task involving

the child's past performance as an informative cue; (2) a risk-taking task involving social norms as an informative cue; (3) embedded figures test; (4) an anxiety measure; and (5) a modified TAT-type fantasy measure of achievement motivation. He suggests that the first measure is indicative of autonomous achievement motivation, that the second, third and fourth measures are indicative of social comparison motivation and that the fifth measure is indicative of integrated motivation.

Using these five tests he reports the following developmental findings.

1) Performance on task one indicates that there is a peak in children's choice of intermediate difficulty task during the second to the fourth grades. However, there is evidence of the existence of an autonomous achievement motivation in both preschool and older children. 2) Performance on task two indicates that preschool children prefer easy tasks and that social comparison is not a critical aspect of their achievement strivings. There is a steady increase in the choice of the "more difficult" tasks as the children grow older. 3) General anxiety scores increase up to the fifth grade at which time these scores drop off significantly. 4) Performances on task five reveal a steady increase in the incidence of achievement fantasy in children's stories as they grow older.

Veroff interprets these findings as support for three developmental assertions: 1) "Social comparison is not necessarily an aspect of achievement incentives for preschool children; it is only in the larger social setting of a grade school that social comparison is inevitably used in evaluating performance and hence in setting standards for the bases of achievement satisfaction." (Veroff, 1969, p.68). The evidence he presents supports this assertion more strongly than the remaining two assertions. 2) "Autonomous achievement motivation begins early, becomes less critical in school years devoted to



social comparison and more critical in late school years, when the child tries to integrate both social and autonomous achievement motivations." (Veroff, 1969, p.74). As indicated above, there was no evidence to support a decrease in the importance of autonomous achievement motivation during the school years. 3) "Integration of appropriate autonomous and social achievement orientations occur gradually after a child has learned some success at social comparison." (Veroff, 1969, p.75). While there is a gradual increase in achievement fantasy as measured by Veroff's test, it is questionable whether this test is, in fact, measuring "integrated achievement motivation". Instead, the data may reflect increasing verbal fluency.<sup>2</sup>

### Conclusions

Although Veroff has developed an intriguing theory, the data he reports do not adequately test his hypotheses, primarily because his measures of the various types of achievement motivation lack content validity. Due to the questionable nature of his basic personality measures, it is difficult to interpret the results based on these measures. However, his data, coupled with the results reported by Kagan and Moss, do support the existence of some stage process. The exact nature of this process can not be deduced from the data reviewed thus far. The existence of stage changes in the child's behavior

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<sup>2</sup>Alternatively, the behavioral phenomena Veroff presents could be the result of changes in the child's criteria for success. At the youngest ages, outcome alone elicits the affective responses linked to success and failure. Some time around the age of six, the child becomes aware that success implies a distinctive performance. Since distinctive is defined, initially, as better than other individuals, affective reaction to outcome becomes dependent on the outcome of others in the child's reference group. As the child develops further, he is able to use more objective standards of excellence to define success. Social comparison becomes just one possible source of information regarding the distinctiveness of one's performance.

and the possibility that different parent behaviors may be conducive to development during each stage suggest a theoretical explanation for some of the ambiguities reported in the parental antecedent data.

#### COGNITIVE APPROACHES TO THE DEVELOPMENT OF ACHIEVEMENT ORIENTATION

During the last ten years there has been increasing concern with the role of cognition in determining behavior. Based on evidence indicating that achievement motivation is linked more consistently to the cognitive dimensions of achievement behavior than to achievement behaviors themselves<sup>3</sup> and on the theoretical formulations of Rotter (1966), Heider (1958), Piaget and Kohlberg (1969), several investigators have re-examined achievement orientation in terms of possible cognitive links between experience and behavior. However, while new models of mature achievement orientation have been proposed and carefully documented, developmental work based on these cognitive approaches has just begun.

#### Contributions of Crandall and her associates

Crandall, Katkovsky and their associates, and Feather use Rotter's

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<sup>3</sup> N-achievement has been found to correlate fairly consistently with several variables related to the cognitive appraisal of an achievement situation: judgments of the quality of one's own work (Crandall, 1969; Katz, 1967), interest in competitive activities (Rosen & D'Andrade, 1959; Winterbottom, 1959), intermediate risk preference (McClelland, 1958; Raynor & Smith, 1959), level of aspiration expectations and performance (Crandall, 1969; McClelland, 1958; Rosen & D'Andrade, 1959; Sears, 1940), cognitive maturity (Veroff, 1969; Bialer, 1961), perceptual field independence (Crandall, 1963), delay of gratification (Mischel, 1961), challenging task preference (Bialer & Cromwell, 1960; Crandall, 1960; Coopersmith, 1960; Pychlak, 1959; Rosenzweig, 1945), causal attribution pattern (Weiner, et al., 1971). In contrast, the relation of n-achievement with actual achievement behavior in specific situations is not clear due to the variety of factors influencing behavior in any given context.

conception of internal control in their investigations of achievement behavior. Their data suggest that both children (Crandall, et al., 1962) and adults (Feather, 1967) will persist at tasks if they feel responsible for the outcome. An internal attribution for outcome responsibility can be a function of either the nature of the task or of individual differences in attributional tendencies. Developmental work has focused on the acquisition of these differential attributional tendencies. Preliminary results indicate that a warm supportive home environment facilitates the development of a belief in internal control (Katkovsky, et al., 1967; Chance, 1965). Based on the results of two studies involving 40 children each, Katkovsky, Crandall and Good (1967) conclude

it seems likely that the more a parent initiates and encourages his child's achievement behavior and the development of his skills, the more the child will learn that it is his own behavior, and not external factors, which will determine the reinforcements he receives. (Katkovsky, et al., 1967, p.766)

While these antecedent variables also correlate with the development of n-achievement, no consistent relationship has been found between n-achievement and belief in internal control (Feather, 1967). Since the developmental work based on this approach currently is focusing on the acquisition of differential beliefs in internal control rather than on the acquisition of achievement oriented behavior, no further review will be included in this paper.

#### Contributions of Weiner and his associates

Extending the work of Heider (1958) and attribution theory to the domain of achievement behavior, Weiner and his associates have developed a two dimensional model of achievement attributions. Weiner et al. (1971) suggest that achievement-related behavior is mediated by attributions regarding causality instead of by an underlying-motivational state. According to the model,

individuals use two dimensions in making these attributions of causality: locus of control and stability. The four elements commonly used to ascribe causality--ability, effort, task difficulty, and luck--fit within these dimensions as diagrammed in Table 2. Furthermore, Weiner et al. (1971) suggest

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 Insert Table 2  
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that attributions within each dimension differentially affect affect and expectancy. Attributions within the dimension of locus of control influence affect. That is, affect (pride or shame) is determined by an individual's perceived internal control over his/her outcomes. Attributions within the dimension of stability influence expectancy. Specifically, outcomes attributed to stable factors are expected to continue while outcomes attributed to unstable factors do not affect expectancy. This model is summarized in Figure 1.

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 Insert Figure 1  
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In addition to task cues influencing attributions, a person's attributional tendencies can determine his/her attributions. As noted in the introduction Weiner and Kukla (1970) report a relationship between achievement and characteristic attributional tendencies. Evidence indicates that high achievers attribute failure to lack of effort and success to either ability or effort. In contrast, low achievers attribute failure to lack of ability but do not attribute success to either effort or ability. As a result of these attributional patterns, high achievers feel they have control over their achievement outcomes while low achievers feel their achievement outcomes are determined by factors outside their control.

Developmental work on this model is in its preliminary stages. Influenced by the cognitive-developmental theoretical approach advanced by Inhelder and

Piaget (1958) and Kohlberg (1969), this work has focused on the emergence and development of the child's causal judgments.

In a study designed to investigate children's use of social norms, Parsons and Ruble (1972) demonstrated that children of all ages can use social norms as a cue for internal attribution in success conditions and that internal attributions produce greater effect across all ages tested--six, eight and ten years of age. However, the six-year-olds did not differentiate their affective response to failure on the basis of social norms. Parsons and Ruble (1972) also investigated the effect of variations in the child's history of success or failure on his/her expectancy. They report that, while 6 year old children continue to predict success despite repeated failure, eight- and ten-year-olds use past history to predict future performance. These results suggest that the ability to use social norms and past history as attributional cues develops with age. Future research will investigate the relation of this developmental change to the cognitive growth processes suggested by Piaget.

In a second developmental study, Weiner and Peter (1972) scored the use of effort as an evaluative cue as the dependent measure in an investigation of the development of attributional processes. The use of effort suggests itself for two reasons. First, evidence indicates that effort attribution is an important correlate of achievement orientation in adults. (Weiner, et al., 1971). Additionally, the use of effort is an indication that the individual is making causal attributions. That is, if a child uses effort as an evaluative cue, then he must be aware that outcomes can have several causes and that these causes can be separated from the outcome itself. Piaget's writing on moral development suggests that the ability to separate intentions from outcomes as evaluative cues develops with age. Since efforts and intentions are

similar in that they both represent internal, unstable attributions, it is reasonable to expect that the use of effort as an evaluative cue also develops with age. The study by Weiner and Peter (1972) investigated this hypothesis. They found that effort or intention, becomes increasingly more important in both an achievement and moral situation from age four to twelve. In contrast, outcome cues become increasingly less important only in the moral situation. In the achievement situation, outcome cues continue to be important evaluative cues. These results suggest that the older children are using at least two evaluative schemas in making their judgments. In the moral situation they are focusing on cues regarding the volitional nature of the behavior to be judged while in the achievement situation they focus not only on the volitional nature of the behavior but also on the outcome itself. More specifically, children seem to use either an intent schema or an intent/outcome schema to judge these two situational stories. Future research will investigate the development of these two evaluative schemas in more detail.

#### Contributions of Heckhausen

Heckhausen and his colleagues have also been concerned with the cognitive origins of achievement orientation. Heckhausen suggests that achievement motivation originated in the child's ability to structure "the situation within an achievement-related person-environment frame of reference" (Heckhausen, 1967, p.143) with the result that

the success or failure of one's activity directs the pleasure or disappointment no longer only at the outcome of the activity as such but rather at the self, so that with success the child experiences pleasure about his competence, and with failure experiences shame about his incompetence. (Heckhausen & Roelofsen, in Heckhausen, 1967, p.143)

He concludes that the first appearances of achievement motivation correspond to the cognitive maturity of the child rather than to the impact of external

factors such as parental characteristics.

His data and the data he reviews suggest three stages in this early development of achievement motivation. Up to approximately three years of age, children respond primarily to objective outcomes. That is, if their efforts result in a desired outcome, they are pleased. If their efforts fail to produce the desired result, they either go on to another task or seek help (Leuba, 1933; McKee & Leader, 1955). Children between three and four and one-half years of age exhibit stronger emotional reactions to failure (Zunich, 1964). Heckhausen suggests that these children are aware of the implications of their actions for their own assessment of their competence. However, these children remain confident in their expectations for future success (Parsons & Ruble, 1972). They are unable to evaluate probabilities of success realistically. Children older than four and one-half are capable to assessing these probabilities and therefore exhibit conflict in situations where the probabilities are not in their favor (Sears & Levin, 1957). It is at this stage that children begin to show intraindividual consistency in preferences for a given level of difficulty in the tasks they pursue. (McClelland, 1958; Sears & Levin, 1957).

### Conclusion

In conclusion though the documentation of the early stages is not complete, there is good support for a change in achievement orientation between the ages of 4 and 6. Several investigators (Leuba, 1933; Parsons & Roble, 1971; Piaget, 1954; and Veroff, 1969) suggest that while preschool children are essentially non-competitive, responding to outcome alone, children older than five define success in terms of the performance of others and exhibit conflict in situations with some probability of failure. Since other areas of cognitive development also suggest a basic change in the child's behavior at approximately 5

(Kohlberg, 1966, 1969; White, Inhelder & Piaget, 1954), it seems likely that the change in achievement orientation reflects some basic cognitive growth process.

Individual differences in achievement orientation are probably the result of an interaction between the cognitive process of the child and the experiences he encounters during socialization. While a child's cognitive maturity limits the meaning he derives from his interactions with his environment, the socialization experiences provide the data he uses in interpreting his world. Various socialization experiences will provide children with differing data bases and, consequently, with differing conceptions of their world. Thus, while the cognitive structures of all 6-year-olds may be similar, differences in experiences will foster variations in children's interpretations of events. For example, a child of 5 or 6 may have the cognitive structure to allow him to make causal attributions but the specific attributions he makes will depend on his experiences. If his parents have provided him with realistic but challenging tasks, then he will have the experiences necessary to allow him to conclude that outcomes vary with effort. Consequently, he is likely to attribute success to effort and failure to lack of effort. In contrast, if his parents have provided him with unrealistically easy or difficult tasks, he will not have had the experiences necessary to allow him to see the covariation of effort and outcome. Consequently, he is less likely to attribute either success or failure to effort.

In light of this interaction process, I suggest that the antecedent socialization variables reviewed earlier, provide the child with an experiential environment which maximizes the probability that he'll interpret his world in such a way as to facilitate the development of achievement orientation.



Thus, the antecedent variables, while not "causing" achievement orientation by mechanistic processes, create a necessary social structure for the development of achievement orientation.

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Table I

## Types of Achievement Orientations Based on Stages of Development

Type	Stage of Autonomy	Stage of Social Comparison	Stage of Inte- gration
1. Integrated Achievement Orientation	+	+	+
2. Competitive Orientation	+	<u>+</u>	—
3. Fear of Failure Orientation (a)	+	—	—
Fear of Failure Orientation (b)	<u>+</u>	<u>+</u>	—
4. Fear of Success Orientation	<u>+</u>	+	—
5. Low Achievement Orientation (a)	<u>+</u>	—	—
Low Achievement Orientation (b)	—	—	—

Note: Symbols are

- + Mastery of Stage
- + Partial Mastery of Stage
- Lack of Mastery of Stage

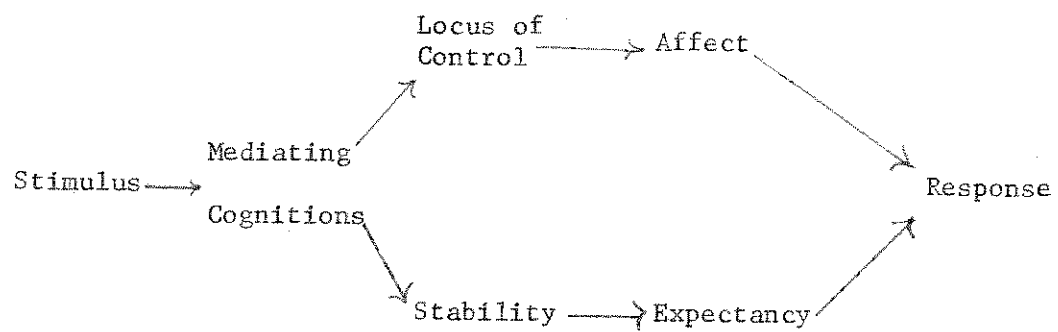
Copied from Veroff, 1969, p. 52

Table II  
 Classification Scheme for the Perceived  
 Determinants of Achievement Behavior

Stability	Locus of Control	
	Internal	External
Stable	Ability	Task Difficulty
Unstable	Effort	Luck

Copied from Weiner et al., 1971, p. 2

Figure I



Copied from Weiner et al., 1971, p. 18.