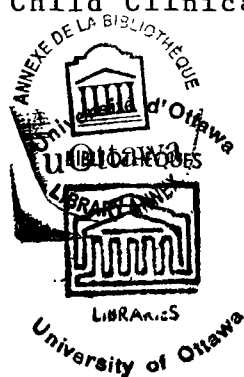


NEED FOR APPROVAL AND THE EFFECTS OF
NORMATIVE AND COMPETITIVE INCENTIVES
ON CHILDREN

by Murray Brown

Thesis presented to the School of Graduate
Studies as partial fulfilment of the
requirements for the degree of
Ph.D. in Child Clinical Psychology



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CURRICULUM STUDIORUM

Murray Brown was born May 24, 1938, in Montreal, Canada. He received the Bachelor of Arts degree from Sir George Williams University, Montreal, Quebec in 1960; the Master of Arts degree in Psychology from the University of Waterloo, Waterloo, Ontario in 1964. The title of his thesis was: An Experimental Investigation of Certain Implications of the Bandura-Walters High-Magnitude Theory of Aggression.

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INTRODUCTION

Around the turn of the century, Binet was concerned with the identification of children in the public schools who could not achieve as much and as quickly as the average child under the usual classroom instruction. In 1904, at the request of the French educational authorities, he served on a commission formed to create special classes for such children to enable them to perform academically at a level commensurate with their intelligence.

It soon became obvious, however, that among both retarded and normal children, there were wide individual differences in the academic performance of children with the same level or degree of intelligence. As a result, attention was focused on the importance of motivation in learning and many experimental investigations took place to study the effects of a variety of devices, such as grades, honor rolls, gold stars, approval of classmates, teacher approval, and praise and blame, as inducements to pupil motivation. The assumption was that such techniques would motivate students to work harder and to perform better.

Thus, recognition of the principle, the total personality structure is involved in academic activity, seems to have occurred. It was acknowledged children have needs causing them to make responses leading to a goal that, when attained, would satisfy their needs. However, with the

exception of some recent work on the effects of incentives on children differing in social class, most investigators employed the same incentive arbitrarily for all subjects; the result was inconsistent and contradictory findings from one experiment to another. Not enough attention has been focused on the fact children at different stages of development, those differing on various demographic and personality variables and in previously experienced life situations develop different needs and thus should respond differentially to various incentives. The character of the need will determine the kind of goal object sought and only a limited number of such objects or states of affairs will satisfy a given need.

The practical problem for educational personnel, especially teachers, is that of providing an incentive consonant with the goals towards which a given individual's behavior is directed. No one incentive will invariably motivate all children and different results with different pupils may be expected from the use of one incentive. Only those incentives that are goals satisfying the needs of individuals should motivate students to perform better and these will differ from one child to another.

The problem of motivating elementary school students to a better academic performance has been made more acute and reached greater public awareness in recent years with

the realization the great public expenditure during the 1960's for teachers, plants, libraries and other curriculum has not led to a closing of the achievement gap between economically and racially dissimilar students hoped for from such special compensatory educational programs as Headstart, Title I, Upward Bound, etc. Indeed, it has generally been found that differences among schools in academic achievement cannot be attributed to variations among them in school facilities and resources.

Since such expenditures are not related to what and how much children learn, it appears, to the writer, to be practical, worthwhile and, above all, economical to search for incentives that motivate individual pupils to their maximum performance. Because children of elementary school age appear to be motivated by a need for approval and are influenced by their relative standing in a group, the concept of need for approval, as elaborated by Crowne and Marlowe, and by Crandall, was chosen as a significant personality variable determining the effectiveness of incentives referring to different levels of achievement.

In order to maximize the effects of the incentives and to minimize the effects, both of earlier learning and of a task possessing high intrinsic interest, it was decided to use a modification of various cancellation tests. The task adopted is extremely dull and repetitious, takes a very long

time to complete yet cannot be finished in the time allotted, and requires a demanding amount of effort to perform. Much earlier research on incentives used school subjects as the dependent measure and it was wished to avoid the confounding effects of intrinsic interest and earlier learning associated with their use.

The thesis is divided into four chapters. The review of the literature starts with an investigation of the behavioral and personality correlates of adults and children characterized by a high need for approval, and is followed by a discussion of those developmental and child-rearing factors relevant to the development of such behavioral traits and personality predispositions. The review ends with a description of previous research on differential incentive effectiveness. The second chapter presents a description of the sample, the measuring instruments and techniques for data analysis; the third chapter contains the results of the experiment. Chapter four is an interpretation of the responses of the children in the testing situation. Conclusions are followed by suggestions for future research.

CHAPTER I
REVIEW OF THE LITERATURE

1. The Concept of Need for Approval

Crowne and Marlowe's book, The Approval Motive,¹ added their names to the growing list of investigators who, since the 1920's, have concerned themselves with the reasons why responses to personality test items do not always lead to predictable behavior. The early approach to this agonizing fact was to place the burden on the subjects whom the psychologists doubted would or could accurately reveal their true behavioral tendencies. Thus, this predisposition to respond was treated as a source of error variance and attempts were made to remove its influence from personality tests by a number of devices designed to induce or trap the subjects into accurately revealing themselves on personality inventories.²

During the 1930's, this procedure was acknowledged to be unsuccessful and the next method used to enhance the predictive validity of the tests was identification of those who concealed their true behavioral tendencies by building some mechanism of control into the test itself. The F, L,

1 D.P. Crowne and D. Marlowe, The Approval Motive, New York, Wiley, 1964.

2 Ibid., p. 4.

and K scales of the MMPI,³ for example, were employed to correct for these pre-existing tendencies to dissimulate. More recent attempts to discover the relationship between test responses and behavior have focused on the subject's particular response style or the set to respond that he brings to the testing situation. The response set of primary interest to Crowne and Marlowe⁴ is the tendency for certain individuals to respond in a socially acceptable manner regardless of item content. That is, this response style is widely general over different items and tests. They regard this particular response style as reflecting one approach to being tested and evaluated and as reflecting more general and important behavioral characteristics. Thus, this set to respond is not held to constitute a source of error variance, but is meaningfully related to one's personality structure and behavior in other situations. Their aim is to discover the motivational determinants of the predilection to respond in this manner and to predict behavioral correlates in other situations. For this purpose, the first necessary step was to construct a pure measure of social desirability responding.

Previous scales designed to measure this response

3 S.R. Hathaway and J.C. McKinley, Minnesota Multiphasic Personality Inventory: Manual for Administration and Scoring, New York, Psychological Corporation, 1967.

4 Crowne and Marlowe, op. cit., p. 9-10.

set, such as the Edwards Social Desirability Scale,⁵ have been constructed by taking items from other scales concerned with pathology and selecting from them those items independently rated by judges as being highly socially desirable or undesirable.

The Marlowe-Crowne Social-Desirability Scale^{6,7} differs from the previous ones in that it is not concerned with pathological content, thus making it more likely responses to the test items will be determined by the operation of the social desirability response set: high scores on this scale, therefore, are more likely than those on the Edwards' scale to reflect the subjects' tendency to present themselves in a favorable light and less likely to reflect the relative absence of maladjustive symptoms. Furthermore, eighteen of the thirty-three items on the M-C SD scale are keyed true and the other fifteen are keyed false, thereby lessening the probability of the acquiescent response set--the indiscriminating tendency to agree--influencing test responses. In summary, the items selected for the scale had

5 A.L. Edwards, The Social Desirability Variable in Personality Assessment and Research, New York, Holt, 1957, p. 59-71.

6 Hereafter referred to as M-C SD scale.

7 D.P. Crowne and D. Marlowe, "A New Scale of Social Desirability Independent of Psychopathology," Journal of Consulting Psychology, Vol. 24, 1960, p. 349-354.

to meet the criterion of cultural approval, be untrue of almost all people and have minimal pathological content.⁸ With these postulates in mind, then, the response variance attributable to social desirability is interpreted by Crowne and Marlowe to mean that people differ in the degree to which they acknowledge personal attributes sanctioned by society to win the approval of others.⁹ They regard this need for approval as a motivational determinant of test-taking behavior reflected on the M-C SD Scale, and it, in turn, reveals the degree to which the individual uses this self-evaluative style in responding to the test situation; furthermore, differences in the need for approval leads to behavioral discrepancies in socially evaluative situations other than the test-taking one.

After developing the M-C SD scale to measure individual differences in social desirability responding, Crowne and Marlowe then proceeded to investigate the behavioral and personality correlates of approval-motivated individuals in a wide variety of nontest-taking situations in which the personality-evaluative consequences of the subject's behavior were at stake. This section will deal with these and related investigations with the aim of elaborating on the general

8 Crowne and Marlowe, The Approval Motive, p. 22.

9 Ibid., p. 27.

frame of reference of the personality correlates of individuals high in the need for approval.

Tasks in which social reinforcement is dispensed for a given class of behavior and/or omitted for another class of behavior lent themselves to social evaluation. It is generally conceded the stronger the need the more effective the appropriate reinforcement. An individual dependent on approval should be more sensitive both to those cues that signify he is responding in a manner leading to approval from a significant person in his environment and to those signs that indicate negative consequences such as criticism and failure. Therefore, those strongly motivated by the need for approval should learn better with approving social reinforcement as a consequence of their behavior than those not so strongly motivated.

One such situation can readily be seen in the verbal-conditioning paradigm since this usually involves the use of reinforcers with obvious social approval consequences such as 'mm hmm', 'good', a smile, a head-nod, etc. That is, under these circumstances, a subject concerned with the socially evaluative consequences of his behavior will know whether or not his behavior is being approved.

Consequently, Crowne and Marlowe¹⁰ conducted three

10 Ibid., p. 48-72.

verbal-conditioning experiments that bear out their prediction those high in the need for approval¹¹ learn faster with social reinforcement than those low in the need for approval.¹² More specifically, in the first two studies, subjects differentiated into HNA and LNA groups by their scores on the M-C SD scale, were reinforced by a head-nod from the experimenter and his uttering of 'mm hm' following every plural noun uttered in the first experiment and following every positive self-reference in the second. As expected, the results indicated that individuals with a high need for approval used more plural nouns and more positive self-references under positive reinforcement than did LNA subjects. No such differences were found in the control condition where the subjects received no reward.

The third study provides even stronger support for the contention individuals differ in the extent to which they are dependent on the routine evaluation of others since it involved a vicarious reinforcement condition. In a situation where no direct social reinforcement is given, but where the individual can observe approval given to someone else for a given class of behavior, those who come to the experiment to perform well to be positively evaluated by

11 Hereafter referred to as HNA.

12 Hereafter referred to as LNA.

others should be more concerned with the meaning of the experimental procedure than those not so motivated. In this way they will learn which behavior leads to approval and the knowledge they are performing well. It would be expected that HNA subjects would be more likely to engage in self-reinforcement than LNA subjects since they are more concerned with the adequacy of their own behavior. Using the Taffel¹³ technique in which HNA and LNA subjects could observe confederates either being reinforced or not reinforced for uttering the two first-person pronouns, Crowne and Marlowe found that only the HNA subjects in the former condition showed a significant increase in the use of 'I-We' pronouns when their performances before and after the training procedures were compared with an appropriate control group. Thus, as in the other two studies, only those individuals high in the need for social approval condition significantly. Those who are motivated to obtain a positive evaluation from others condition when there are actions on the part of the experimenters that indicate what behavior of the subject will be approved. In the last experiment, the HNA subjects who observed no differentially reinforced verbal behavior did not condition. That is, there were no cues to tell these

13 C. Taffel, "Anxiety and the Conditioning of Verbal Behavior," Journal of Abnormal and Social Psychology, Vol. 51, 1955, p. 496-501.

subjects what behavior on their part would bring about a favorable evaluation. These three studies then, tend to support the author's contention that individuals characterized by a high need for social approval are concerned with the evaluative consequences of their behavior whereas those not so strongly motivated are more concerned with the intrinsic nature of the experiment and testing hypotheses.¹⁴

Another body of evidence produced by Crowne and Marlowe shows that persons already motivated for approval show a greater sensitivity and responsiveness to cultural norms because they are concerned with how people evaluate them. This evidence also reflects the presence of a strongly reinforced history of social dependence; that is, the subjects enter experimental tasks with this enduring personality characteristic. Research bearing on this postulate¹⁵ suggests that those who are dependent on the positive regard of others tend to restrict their associations to the conventional, popular, or common, so as not to reveal any personal characteristics that might not meet with the approval of society. This tendency of approval-motivated individuals to give popular and stereotyped responses to avoid disapproval

14 Ibid., p. 69-70.

15 J.J. Jenkins, "Effects on Word-Association of the Set to Give Popular Responses," Psychological Reports, Vol. 5, 1959, p. 94.

has even been extended to their performance on the projective Rorschach test.¹⁶

In an attempt to show that behavior of approval-dependent individuals, other than that elicited by psychological and language tests, is influenced by perceived cultural norms, Crowne and Marlowe¹⁷ reported an investigation by Barthel on goal-setting behavior. In a dart-throwing task, those with a high need for approval chose an intermediate distance more often and showed less variability in the level of difficulty selected than the LNA subjects. Since the subjects were not able in this experiment to compare their performance with that of others, the approval-motivated subjects who wanted to select a distance that would correspond with social norms would have to choose a level of difficulty on the basis of a prior knowledge of these norms. Throwing the dart from too short a distance would be so easy as to invite ridicule whereas if he threw it from too great a distance, he might be considered a braggart. Neither of these two situations correspond to the

16 T.A. Tutko, Need for Social Approval and its Effect on Responses to Projective Tests, unpublished doctoral dissertation, Northwestern University, 1962.

17 C.E. Barthel, "The Need for Approval and Goal-Setting Behavior," unpublished research, The Ohio State University, 1961, quoted by Crowne and Marlowe, The Approval Motive, p. 93-95.

cultural norm and would therefore not lead to a favorable evaluation.

In a variation on this goal-setting experiment, Barthel¹⁸ found approval-dependent subjects with a low expectancy of success showed less variability in their choice of an intermediate distance than LNA subjects and HNA subjects with a high expectancy of success. Furthermore, they were even more rigid under a condition threatening self-esteem, but less rigid under a condition favoring self-esteem. These results led Barthel¹⁹ to suggest that approval dependence was "[...] reminiscent of the maladaptive results of the 'idealsself' described by Honey (1950)." In other words, because these persons' low esteem does not lead them to expect sufficient success in any area of human functioning, the results suggest they might be attempting to support their poor self-concept by acting in ways that bring about a favorable evaluation from significant others. Thus, those who portray themselves as near-perfect human beings on social desirability questionnaires and other personality tests might be using repressive avoidant devices to conceal

18 C.E. Barthel, The Effects of the Approval Motive, Generalized Expectancy, and Situational Cues upon Goal Setting and Social Defensiveness, unpublished doctoral dissertation, The Ohio State University, 1963.

19 Ibid., p. 20.

personal flaws from themselves and others and to defend their self-esteem. Thus, in order to test the implications of this hypothesis, Crowne and Marlowe have compiled a growing body of evidence to indicate the 'norm-dependent' behavior of approval-motivated individuals is designed to avoid disapproval and utilized to protect their poor self-image.

This hypothesis is supported by a study by Crowne and Liverant,²⁰ who found that high need for approval subjects who, on a measure of generalized expectancy, indicated their approach to goal-setting reflected lack of self-confidence and avoidance of expected failure, displayed a much greater degree of conformity than did LNA subjects. The confident approach to goal-setting of LNA subjects revealed higher, more appropriate expectations.

This experiment, in addition to that of Barthel,²¹ shows that approval-motivated individuals tend to describe themselves as flawless individuals on personality measures, but their behavior in other situations is designed to avoid failure.

Projective psychological tests have also revealed

20 D.P. Crowne and S. Liverant, "Conformity under Varying Conditions of Personal Commitment," Journal of Abnormal and Social Psychology, Vol. 66, 1963, p. 547-555.

21 Barthel, op. cit.

this contrasting relationship for approval-dependent people. In the Tutko²² study, these subjects were less revealing and more defensive than LNA subjects in their responses to the Rorschach, TAT, and the Incomplete Sentence Blank. In addition, the greater defensiveness of HNA subjects compared to the LNA individuals increased from a supportive to a stress condition used in the investigation.

Closely related to the tendency to engage in conventional, stereotyped, norm-dependent behavior is the characteristic of approval-motivated people to avoid behavior they perceive as not sanctioned by society and to comply with the implied demands of an authority or otherwise prestigious figure. Studies suggesting this conclusion^{23,24} use socially evaluative situations in which the individual can act in ways designed to avoid disapproval and thus defend his vulnerable self-esteem from threatening blows.

Furthermore, Marlowe and Crowne²⁵ found HNA

22 Tutko, op. cit.

23 M. Reznikoff and A. Dollin, "Social Desirability and the Type of Hostility Expressed on the TAT," Journal of Clinical Psychology, Vol. 17, 1961, p. 315-317.

24 L.K. Conn and D.P. Crowne, "Instigation to Aggression, Emotional Arousal, and Defensive Emulation," Journal of Personality, Vol. 32, 1964, p. 163-179.

25 D. Marlowe and D.P. Crowne, "Social Desirability and Response to Perceived Situational Demands," Journal of Consulting Psychology, Vol. 25, 1961, p. 109-115.

individuals not only expressed more favorable attitudes toward a long, boring task they were not allowed to leave, they volunteered to participate in a further similar experiment. Linton and Graham²⁶ showed opinion changers held submissive attitudes to authority as measured on the California F-Scale and other studies found HNA persons changed their opinion to conform with an incorrect majority. Various other data also indicate individuals who are compliant, conform, and are easily influenced, possess low self-esteem.²⁷

In summary, the evidence presented in this section indicates that adults who obtain high scores on the M-C SD scale (HNA) have a tendency to respond in socially desired ways in a wide variety of situations to obtain the approval of others, and to maintain a personally acceptable image. This tendency reflects a widely generalized self-evaluative style serving to avoid self-criticism and a negative evaluation from important others as well as to defend one's self-esteem.

Research on the characteristics of approval-motivated

26 H. Linton and E. Graham, "Personality Correlates of Persuasibility," in C.I. Hovland and I.L. Janis (eds.), Personality and Persuasibility, New Haven, Yale University Press, 1959, p. 69-101.

27 A.R. Cohen, "Some Implications of Self-Esteem for Social Influence," in ibid., p. 102-129.

children has resulted in a picture somewhat similar to that of their adult counterpart. The following review considers the research evidence that supports this claim. Subsequently, the developmental aspects and sex differences that characterize high and low need for approval individuals will be reviewed.

The most-concentrated attempt to discover the behavioral and personality correlates of approval-motivated children has been undertaken by Crandall and her associates.^{28,29} They have developed a scale to measure social desirability responding in children and have conducted investigations designed to ascertain the psychological significance of such response tendencies. Both the development of the scale and the nature of the investigations have been guided by the premises and interpretations of the work of Crowne and Marlowe.

Despite the use of the term 'need for approval', many of the validating studies of Crowne and Marlowe strongly indicate that individuals highly motivated by this need do

28 V.C. Crandall, V.J. Crandall and W. Katkovsky, "A Children's Social Desirability Questionnaire," Journal of Consulting Psychology, Vol. 29, 1965, p. 27-36.

29 V.C. Crandall, "Personality Characteristics and Social Achievement Behaviors Associated with Children's Social Desirability Response Tendencies," Journal of Personality and Social Psychology, Vol. 4, 1966, p. 477-486.

not actively seek approval and recognition by engaging in behavior more competent than the norm but rather try to avoid disapproval by modeling behavior on that of the norm group and concurring with the wishes, opinions, and attitudes of authority figures and of the majority of their peers. For example, the studies on conformity using Asch-type situations, carried out by Crowne and Marlowe, revealed HNA subjects conformed more than did LNA subjects. In addition, when free-play behaviors were rated in a day camp setting at the Fels Research Institute,³⁰ it was found that girls with high social desirability scores did not engage as frequently in associative play with peers, withdrew more often from the social environment, and withdrew instead of responding with verbal or physical aggression when others attacked them. Lahaderne and Jackson³¹ substantiated these findings regarding withdrawal for girls to classroom situations. Girls scoring high on Crandall's Children's Social Desirability Scale³² engaged in fewer self-initiated interactions and fewer instructional interactions with the

30 Ibid.

31 H.M. Lahaderne and P.W. Jackson, "Withdrawal in the Classroom: A Note on some Educational Correlates of Social Desirability among School Children," Journal of Educational Psychology, Vol. 61, 1970, p. 97-101.

32 Hereafter referred to as CSD scale.

teacher and showed more inattentiveness than girls with low scores. In summary, then, these findings suggest a desire to avoid disapproval. Boys characterized by this trait imitated the play activities of other children more often than those with low social desirability scores, which may be somewhat analogous to the studies dealing with conforming and culturally-bound behavior in adults. Such boys also were rated as showing fewer behaviors that would bring them the approval and recognition of adults, displaying fewer attempts at free-play achievement behaviors, and being less persistent when they did engage in achievement activities; which is what one might expect if these children also feel less capable of obtaining positive reinforcement for their efforts. Direct evidence of this hypothesis is supplied by the fact that in the free-play day camp setting, boys with high social desirability scores had lower expectancies of success in four achievement areas: intellectual, physical skills, artistic and manual-mechanical. Furthermore, another study, using the Epstein Children's Need for Approval Scale,³³ revealed boys with a high need for approval stated lower expectancies for success and adopted a higher percentage of failure-avoiding behavior patterns on the Rotter Level of Aspiration

33 R. Epstein, "Need for Approval and the Conditioning of Verbal Hostility in Asthmatic Children," Journal of Abnormal and Social Psychology, Vol. 69, 1964, p. 105-109.

Board than did boys with a lesser need for approval.³⁴

That approval-motivated children as well as adults are more aware of behavior not sanctioned by significant others in society and that they are more responsive to cues signifying such behavior is or is not considered acceptable is seen in a verbal conditioning study.³⁵ High need for approval children aged seven to twelve, showed a significantly greater conditioning effect when reinforced by the word 'good' for emitting hostile verbs than for neutral verbs, and revealed a greater awareness of the reinforcement contingency under the hostile reinforcement condition. The low need for approval subjects showed the reverse for both comparisons. In fact, they did not show any conditioning under the hostile reinforcement condition. These results strongly suggest that approval-dependent children have an intense concern with hostility and are sensitized to hostile responses, since denial of hostility is characteristic of those with a strong need for approval. Thus, they are more likely to be aware of the contingency between verbal approval and hostile verbalizations. As a result, when such behavior brings about social approval, the child characterized by a

34 J.H. Kopfstein, "Social Desirability, Expectancy, and Success-Failure-Oriented Behavior in Children," Journal of Consulting and Clinical Psychology, Vol. 35, 1970, p. 428.

35 Epstein, op. cit., p. 105-109.

strong need for approval loses his inhibitions and anxieties concerning its expression. The results of this same study also showed that such children conditioned more effectively across response classes than their low need for approval counterparts suggesting that, as with adults, preference for social rewards is more characteristic of children motivated to obtain social approval and that social rewards facilitate learning for these subjects.

The characteristics of children strong in the need for approval manifested in experimental and real-life situations have also been exhibited on a multidimensional personality inventory.³⁶ Employing the California Psychological Inventory (CPI), it was found that tenth-grade boys and girls who obtained high scores on the CSD questionnaire also had scores on the CPI that indicated they were controlled, inhibited, conventional, suggestible, lacking in self-confidence, of low self-esteem, concerned with others' evaluation, and less participative.

The results to date of the search to discover the behavioral and personality characteristics of approval-motivated children reveal a striking similarity to the findings for such adults. These results indicate strongly that children who describe themselves as near-perfect

36 Crandall, op. cit., p. 478-479.

individuals on personality tests also exhibit avoidant, defensive, and self-protecting behavior in experimental and real-life situations. These behaviors are devices to avoid disapproval and to protect their self-esteem since they have little confidence in their own abilities to achieve success in socially evaluative situations.

These general conclusions are supported by the findings of the demographic correlates of high social desirability responding. In three separate studies,^{37,38,39} for example, it was found that the scores of children in grades one to twelve on the CSD scale decreased steadily with age. Furthermore, girls scored higher than boys in all three studies. Crandall, Crandall and Katkovsky⁴⁰ offer the explanation that when a child feels at a personal disadvantage either because he feels neither instrumentally adequate nor emotionally independent as a result of age or sex, one way to obtain satisfaction is to gain approval from adults by appearing polite, sweet and good. This hypothesis is supported by the fact that when the CSD scores of children

37 Crandall et al., op. cit., p. 31.

38 Crandall, op. cit., p. 477.

39 V.C. Crandall and J. Gozali, "The Social Desirability Responses of Children of Four Religious-Cultural Groups," Child Development, Vol. 40, 1969, p. 751-762.

40 Crandall et al., op. cit., p. 34.

from the college laboratory sample only were analyzed, no significant difference between the sexes was found.⁴¹ Nor were any significant sex differences found by Edwards⁴² and Marlowe and Crowne⁴³ when college men and women were used. Thus, when satisfaction is obtained by personal qualities that are valued in present-day culture, there is less need to acquire rewards by presenting a socially desirable image.

Further support for this 'compensatory' or 'disadvantaged' hypothesis is obtained from the relationship between CSD responding and both I.Q. and ethnicity. Crandall, Crandall and Katkovsky⁴⁴ found a significant correlation of -0.19 between I.Q. and CSD responses and that Negro children obtained higher scores than white children. Thus, there is evidence to indicate that children in less privileged positions on demographic variables are more likely to present a socially desirable image of themselves. These findings are somewhat analogous to those indicating individuals with little confidence in their own personal abilities portrayed themselves in a socially desirable light to protect their poor self-concept.

41 Ibid., p. 30.

42 Edwards, op. cit., p. 59-71.

43 Marlowe and Crowne, op. cit., p. 109-115.

44 Crandall et al., op. cit., p. 33.

The following section deals with those factors related to the development of the behavioral and personality characteristics that differentiate high from low need-for-approval individuals. Specifically, the factors relating to the development of norm-dependent, modeling, compliant, and other avoidance behaviors versus active approval seeking behavior will be discussed as a function of the child's developing interactions with parents, other adult authority figures and his peer group, since the incentives used in this study involve comparison with a peer group standard. Because this study includes the sex variable, a discussion of sex differences along these dimensions will follow.

2. Developmental Aspects of Approval-Motivated Behavior

That children become both less emotionally dependent on adults and instrumentally more adequate with increasing age has become a well-documented finding of developmental psychology. As the child passes the dependency stage of infancy, between the first and second years of life, the average parent begins to make demands on their offspring for more mature and self-reliant behavior. In order to retain the parent's approval and to ensure his sense of security and adequacy, the child tends to perceive the world in terms of standards, values and expectations of the parent who

provides him with this derived status.⁴⁵ In the normal course of events then, the child who perceives himself to be genuinely accepted and valued for himself for altruistic reasons, and not for his value in enhancing the parent's needs, tends to conform to the parent's expectations.^{46,47} The child tends to develop uncritical acceptance of the parent's value system, irrespective of the expediency of its assimilation in satisfying one's immediate desires or the objective content of the value.⁴⁸

As the child enters school and interacts with his peer group, the two sources, teacher and peer group, combine to exact conformity from the child. The school puts great demands on the child for compliance with adult standards of behavior and the peer group offers the child a much greater opportunity to display his own skills, knowledge, and abilities, and thus to enhance his self-esteem, than does

45 D.P. Ausubel, Theory and Problems of Child Development, New York, Grune and Stratton, 1958, p. 291-292.

46 -----, "Perceived Parent Attitudes as Determinants of Children's Ego Structure," Child Development, Vol. 25, 1954, p. 173-183.

47 R.N. Sanford, "Correlates of Manifest Personality Patterns," Child Development Monographs, Vol. 8, No. 1, 1943, p. 523-582.

48 E.L. Horowitz, "The Development of Attitude toward the Negro," Archives of Psychology, Vol. 28, No. 194, 1936.

the family environment. For this reason, as the children grow older, there is a strong need to maintain a subculture that is distinctive from that of the adult. Conformity to a set of prescribed rules is necessary for this purpose as well as to withstand the infringement of adult society. As Ausubel⁴⁹ states, the power of the peer group to enforce conformity is enhanced from middle childhood to adolescence because during this period the child's stake in it is increased. This influence has been well illustrated experimentally in an investigation by Patterson and Anderson⁵⁰ who, in a marble-sorting task, found an increasing susceptibility between the ages of seven and ten to social reinforcement by peers.

The increasing conformity of the child to the social pressures of home, school and peer group in the direction of the norms, expectations, standards, and values of the society in which he lives has been demonstrated by Getzels and Walsh.⁵¹ Their results indicated that children between the ages of eight and thirteen, subjected to socializing pressures for

49 Ausubel, op. cit., p. 481.

50 G.R. Patterson and D. Anderson, "Peers as Social Stimuli," Child Development, Vol. 35, 1964, p. 951-960.

51 J.W. Getzels and J.J. Walsh, "The Method of Paired Direct and Projective Questionnaires in the Study of Attitude Structure and Socialization," Psychological Monographs, Vol. 72, No. 1, 1958.

longer periods of time, showed a progressively greater degree of suppression of socially disapproved personal attitudes, impulses, and behavior, and a corresponding expression of overt reactions in the direction of greater social conformity.

Both the increasing influence of his peer group and the child's more active and assertive behavior to satisfy his own needs and to enhance his self-esteem is illustrated even during the preschool years in two well-known studies.^{52,53} Heathers,⁵⁴ for example, found, using two groups of twenty two-year-old and twenty four- or five-year-old nursery school children, both a decline with age in teacher-oriented relative to child-oriented dependence, and degree of clinging or affection-seeking relative to approval- or attention-seeking. Both the amount of physical clinging or affection-seeking and attention- or approval-seeking in relation to the teacher declined with age, the former more than the latter; whereas, on the other hand, attention- or approval-seeking directed toward other children showed a

52 E.K. Beller, "Dependency and Independence in Young Children," Journal of Genetic Psychology, Vol. 87, 1955, p. 25-35.

53 G. Heathers, "Emotion Dependence and Independence in Nursery School Play," Journal of Genetic Psychology, Vol. 87, 1955, p. 37-57.

54 Ibid., p. 45.

large and reliable increase. In addition, there were no age changes in clinging or affection-seeking in relation to other children.

The results of Heathers' study support the assumption that in our culture children are discouraged from directing their emotional dependence to their parents or other adults and expressing it in the passive form of clinging or affection-seeking. Rather, the findings support the assumption children are encouraged to actively seek attention and approval for their accomplishments and to direct this form of expressing emotional dependence towards other children. In short,

These results favor the interpretation that, in the process of socialization, emotional dependence tends to shift away from a passive, 'infantile' dependence on adults toward a more active and assertive dependence on one's peers.⁵⁵

The relation of the measures of dependence-independence used in this study to those indicating the type of play a child is engaged in supports the 'compensatory' hypothesis of Crandall, Crandall and Katkovsky.⁵⁶ Specifically, it was found those children who sought approval and attention from other children were also those who more often structured and interfered with the play of other children.

55 Ibid., p. 56.

56 Crandall, et al., op. cit., p. 34.

In fact, Heathers⁵⁷ concluded the results of this study indicated two general patterns of dependence-independence behavior, 'social insecurity' and 'assertive sociability'. The former included high inactivity, high passive dependence on teachers or children, low attention- or approval-seeking, and low social-assertiveness; the latter generally includes a contrasting position on each of these categories. It is most significant that these two general patterns tend to parallel the findings of Crandall⁵⁸ in which high-scoring social desirability children displayed the behavior described by the first pattern and low-scoring children the behavior included in the second pattern. Especially significant are the correlates of attention- and approval-seeking discovered in both studies. They support the position expressed earlier that those who have little confidence in their own ability to obtain approval as a result of their own efforts tend to withdraw from social situations and avoid disapproval by general inactivity and by doing what they are told. And the behaviors described in the second pattern generally increase with age showing a corresponding decrease in scores on the CSD scale.

The developmental literature also provides sufficient

57 Heathers, op. cit., p. 54.

58 Crandall, op. cit., p. 477-486.

evidence to conclude that the conforming, compliant, norm-oriented attitudes and behavior predicted by the need-for-approval concept is more characteristic of girls than it is of boys. For example, in the Getzels and Walsh⁵⁹ investigation, the results, predicted on the basis of the girls' greater social conformity and maturity during the years prior to puberty, indicated they comply more to social expectations than boys in that their expressed reactions undergo greater modification in the direction of greater social acceptability. Since this tendency is predicted by the need for approval construct, it is not surprising to find girls score higher on the CSD scale.

The greater amenability of girls to social influence and their inhibition of a social behavioral tendencies has been displayed in a wide variety of socially evaluative situations. For example, Jersild and Markey⁶⁰ found that boys were both more rebellious and negative, and expressive of anger than were girls. Jersild and Tasch⁶¹ also reported greater negativism among boys and produced evidence indicating girls are

59 Getzels and Walsh, op. cit., p. 21.

60 A.T. Jersild and F.V. Markey, Conflicts Between Preschool Children, New York, Teachers College, Columbia University, 1935.

61 A.T. Jersild and R.J. Tasch, Children's Interests and What They Suggest for Education, New York, Teachers College, Columbia University, 1949.

more obedient and amenable to social controls. In addition, the findings of Witryol⁶² showed that female children are more sensitive to social situations and expectations. Hence it is not surprising to find, as did Hartshorne, May and Shuttleworth⁶³ that they make higher scores on tests of moral judgment and self-control and they lie more for conventionally social reasons.

These findings are consistent with the sex-linked correlates of the CSD scale found by both Crandall⁶⁴ and Lahaderne and Jackson,⁶⁵ and reported above. High CSD scores were more often associated with girls' withdrawal and the absence of aggression in social situations and those of boys were more frequently related to their achievement behaviors. Furthermore, in several studies on achievement

62 L. Witryol, "Age Trends in Children's Evaluation of Teacher-Approved and Teacher-Disapproved Behavior," Genetic Psychology Monographs, Vol. 41, 1950, p. 271-326.

63 H. Hartshorne, M.A. May and F.K. Shuttleworth, Studies in the Nature of Character: Vol. 3 Studies in the Organization of Character, New York, Macmillan, 1930.

64 Crandall, op. cit., p. 477-486.

65 Lahaderne and Jackson, op. cit., p. 97-101.

motivation,^{66,67,68} it has been found that girls' scores do not increase significantly as do boys' in situations that stress successful competition. However, in Field's⁶⁹ study the scores did increase significantly when 'popularity' and 'social acceptance' were stressed.

These results provide evidence indicating girls are more sensitive and responsive to situations involving social expectations. That is, in a wide variety of socially evaluative situations, female children display approval-motivated behavior more frequently than male children. They comply more to social expectations, suppress the expression of socially unacceptable attitudes to a greater degree, and are more obedient, conventional and polite in their behavior than boys; and girls score higher on the CSD scale.

Crowne and Marlowe⁷⁰ state that a further essential

66 J.A. Veroff, "A Projective Measure of Achievement Motivation in Adolescent Males and Females," unpublished honors thesis, Wesleyan University, 1950, quoted by R. Brown, Social Psychology, New York, The Free Press, 1964, p. 439.

67 S. Wilcox, "A Projective Measure of the Achievement Motivation of College Women," unpublished honors thesis, University of Michigan, 1951, quoted by R. Brown, op. cit.

68 W.F. Field, "The Effects of Thematic Apperception upon Certain Experimentally Aroused Needs," unpublished doctoral dissertation, University of Maryland, 1951, quoted by R. Brown, op. cit.

69 Ibid.

70 Crowne and Marlowe, The Approval Motive, p. 195.

step in the validation of the concept of the need for approval is to discover the childhood experiences that give rise to the behaviors mediated by the need for approval concept and to the dynamic processes underlying this motive. A knowledge of these experiences will also help in understanding what level of peer group achievement will motivate approval-dependent children because such is the nature of the incentives to be used in this study. Accordingly, an attempt will be made to ascertain the child-rearing antecedents of this personality disposition.

3. The Child-Rearing Antecedents of Social Desirability Response Tendencies

Apparently, the first attempt to search for the parental antecedents of the social desirability response was made by Conn and Crowne⁷¹ when children who had been subjects in the Sears, Maccoby and Levin (1957) study were given the M-C SD scale twenty-five years later. No relationships were found, however, between maternal child-rearing practices and adult scale scores.

To the author's knowledge, only one other attempt has

71 Personal communication quoted by V.C. Crandall, "Maternal Antecedents of Children's Social Desirability Response Tendencies," (mimeographed), unpublished Current Project 9, N.I.H. Progress Report, January, 1966-December, 1968, p. 95-87.

been made to date. Crandall⁷² has related the CSD responses of children from the Fels Research Institute to the maternal data taken from the files at that institute, and found "somewhat more encouraging results."

In this investigation, scores on the CSD scale were obtained for children from six years, ten months to twelve years, eight months, the subjects being divided into a younger and older group by the age of nine years, five months. The maternal antecedents were measured by ten of the Parent Behavior Rating (PBR) scales. This data was similarly divided at the age of three years, four months. The ratings used were those done from birth to six years, eight months.

In her main analysis, Crandall⁷³ found only one significant correlation for girls, but a fairly definite pattern cluster of relationships for boys. Because of this and certain statistical considerations, she includes 'p. 10' trends in her discussion of the results. Furthermore, this author believes there is sufficient evidence from the literature of developmental psychology involving the relationships between various child-rearing practices and the behaviors predicted by the need for approval concept to

72 Ibid., p. 75

73 Ibid., p. 78.

warrant consideration of the trends found in this study; consequently, this evidence will be presented.

Crandall⁷⁴ concluded the maternal child-rearing practices antecedent to social desirability response-giving could be generally characterized as harsh or severe. One set of such practices included the greater restriction of freedom, severity of punishment, and coercion used during the preschool period (three years, six months to six years, five months) by such mothers. They were more likely to restrict the child's behavior beyond that necessary for his welfare, to utilize severe punishment invoking dread and terror in the child, and to demand immediate compliance to their orders.

This harsh, severe, restrictive, maternal pattern has been related to the behaviors mediated by the need for approval concept in the developmental literature. For example, Sears⁷⁵ and Kagan and Moss⁷⁶ found that children who receive severe punishment and threat when deviating from maternal standards are more conforming and less aggressive than children of permissive mothers.

74 Ibid.

75 S. Sears, "Doll Play Aggression in Normal Young Children: Influence of Sex, Age, Sibling Status, Father's Absence," Psychological Monographs, Vol. 65, No. 6, 1951.

76 J. Kagan and H.A. Moss, Birth to Maturity: A Study in Psychological Development, New York, Wiley, 1962.

An experiment by Mussen and Kagan⁷⁷ demonstrated that college students who revealed through TAT themes high punishment at home conformed in the direction of the false judgement of confederates much more than those who received mild punishment. The writers concluded that yielding or conforming reduced anxiety and guilt stemming from the deviation from parental standards and through generalization yielding became a habitual mode of response to life. This interpretation obviously corresponds closely to that of Crowne and Marlowe⁷⁸ who stated the conformer has to surrender his own opinions, perceptions, and beliefs because he has little expectancy of success in a socially evaluative situation such as this.

Studies on the effects of restrictiveness also indicate that where the child is the recipient of parental pressure for conformity to their demands, he will exhibit behavior that corresponds to the expectations of significant others in his environment. Both McCord, McCord and Howard⁷⁹

77 P.H. Mussen and J. Kagan, "Group Conformity and Perceptions of Parents," Child Development, Vol. 29, 1958, p. 57-60.

78 Crowne and Marlowe, The Approval Motive, p. 160-161.

79 W. McCord, J. McCord and A. Howard, "Familial Correlates of Aggression in Nondelinquent Male Children," Journal of Abnormal and Social Psychology, Vol. 62, 1961, p. 79-93.

and Levy⁸⁰ discovered that mothers who were overprotective and dominating produced children who were nonaggressive and nonassertive at home and school, displaying such socially desirable characteristics as neatness, obedience, and politeness.

If one assumes, as does Schachter,⁸¹ that the overprotective, overcontrolling, dominating behavior of the mother is more characteristic of her when the child is a first-born, then it is not surprising Ehrlich⁸² found that such children and only children modified their judgements regarding the outcome of a case study in the direction of a fictitious group norm more readily than did later-born individuals. These findings are also substantiated by the confirmation of one hypothesis in the Getzels and Walsh⁸³ study cited earlier. They found the oldest of three children showed a statistically significant greater change from socially unapproved private attitudes to the expression of socially approved reactions than did the youngest of

80 D.M. Levy, Maternal Overprotection, New York, Columbia University Press, 1943.

81 S. Schachter, The Psychology of Affiliation, Stanford, Stanford University Press, 1959, p. 43.

82 D. Ehrlich, Determinants of Verbal Commonality and Influencibility, unpublished doctoral thesis, University of Minnesota, 1958.

83 Getzels and Walsh, op. cit., p. 22.

three children. Furthermore, only children, to whom the mothers theoretically have more time to pay attention and hence restrict more, revealed an even greater change than the first-borns. These results suggest that those subjected to greater amounts of maternal restrictiveness during childhood, tend to show a greater inhibition in the expression of forbidden impulses, behaviors, and attitudes, bringing them into closer conformity with social expectations.

The findings already summarized in this section indicate that the differential degree of restrictiveness, punitiveness and coercion the parents apply to change the child's behavior into closer conformity to the social norms of appropriately mature behavior are relevant variables concerning the development of those patterns of behavior mediated by the need for approval concept. Permissiveness appears to reinforce a wide range of nonconforming responses and attitudes and restrictive parental behavior serves to generally inhibit such behavior and attitudes.

Another set of child-rearing practices significantly correlated with high social desirability responding for boys in the Crandall⁸⁴ study was that of a lack of maternal warmth and affection, and a lack of approval and/or criticality. That is, such behaviors on the part of mothers from

84 Crandall, op. cit., p. 80.

the period of birth to three years, produced in their sons a later concern with others' acceptance. Affectionateness had this effect throughout the whole six- to twelve-year age range and maternal criticality did not show up significantly until the child reached nine years old.

These two maternal practices, which Crandall also includes under the heading of harsh or severe, have also been related to the behaviors predicted by the need for approval concept in the developmental literature. This body of data shows that restrictiveness, punitiveness, and coercion combined with a lack of affection, warmth and approval are antecedents of such behavior.

Frenkel-Brunswik⁸⁵ found parents of authoritarian children used harsher, more rigid norms and were primarily obsessed with a need to transmit a set of fixed rules and customs, compared with parents of egalitarian children. Authoritarianism was measured by the California F-Scale that taps some of the personality characteristics described by the need for approval concept. And in at least three

85 E. Frenkel-Brunswik, "Further Explorations by a Contributor to 'The Authoritarian Personality'," in R. Christie and M. Jahoda (eds.), Studies in the Scope and Method of "The Authoritarian Personality," Glencoe, The Free Press, 1954, p. 226-275.

investigations,^{86,87,88} significantly positive correlations were found between scores on the California F-Scale and the amount of yielding or conformity in a group pressure situation.

Further studies indicate this constellation of child-rearing practices leads to a greater denial and repression of true impulses. For example, Sears'⁸⁹ findings revealed that severely punished children displayed more aggressive impulses than less harshly punished children in doll-play (fantasy) productions even though they showed less aggression in their interaction with nursery school children. Furthermore, Ruebush, Byrum and Farnham,⁹⁰ and Miller and Swanson⁹¹ provide evidence that mothers who are less warm, supportive, and encouraging and who employ harsher and more inflexible

86 R.S. Crutchfield, "Conformity and Character," American Psychologist, Vol. 10, 1955, p. 191-198.

87 E.B. Nadler, "Yielding, Authoritarianism, and Authoritarian Ideology Regarding Groups," Journal of Abnormal and Social Psychology, Vol. 58, 1959, p. 408-410.

88 W.D. Wells, G. Weinert and M. Reubel, "Conformity Pressure and Authoritarian Personality," Journal of Psychology, Vol. 42, 1956, p. 133-136.

89 Sears, op. cit.

90 B.K. Ruebush, M. Byrum, and L.J. Farnham, "Problem Solving as a Function of Children's Defensiveness and Parental Behavior," Journal of Abnormal and Social Psychology, Vol. 67, 1963, p. 355-362.

91 D.R. Miller and G.E. Swanson, Inner Conflict and Defense, New York, 1960, p. 213-271.

disciplinary techniques have boys who display a greater use of such defensive mechanisms. These results suggest the same maternal child-rearing practices that are antecedents of high social desirability responding are also associated with the use of defense mechanisms of denial and repression. Furthermore, more defensive denial is also characteristic of those with high social desirability scores. In addition, the findings from the free-play day camp setting⁹² suggested more defensive behaviors are evidenced by boys with high scores on the CSD scale.

One other maternal child-rearing practice in the three- to six-year age range that Crandall⁹³ found to be significantly correlated with their sons' later concern with approval (9-12 years) was acceleration attempts. This relationship was an inverse one; sons who were later less dependent on others' reactions had mothers who gave them regular, vigorous training to develop advanced skills. This result is also substantiated in the literature in that such training has shown to lead to greater intellectual achievement in later development and those with high social desirability scores show less achievement.

92 Crandall, "Personality Characteristics [...]," 1966, p. 477-486.

93 Crandall, "Maternal Antecedents [...]," 1966-1968, p. 81.

In the study of the childhood origins of achievement motivation, Winterbottom⁹⁴ found the mothers of eight- to ten-year-old sons with high scores reported they expected their sons to accomplish new things independently and at a much earlier age than did mothers of low-scoring sons. Similarly, Rosen and D'Andrade,⁹⁵ in actual observation in the home of how the parents related to their sons in the latters' achievement attempts, discovered, when told what the average boy could accomplish in the particular circumstances, that the parents of boys with high achievement motivation scores set higher levels of aspiration than did mothers of low-scoring sons. In addition, Kagan and Moss⁹⁶ have shown that those who have been encouraged to act independently and to do things for themselves evidenced greater intellectual achievement and stronger and more frequent achievement strivings outside the home.

The results from the Crandall⁹⁷ study reported earlier showed that approval-dependent children displayed

94 M.R. Winterbottom, The Relation of Childhood Training in Independence to Achievement Motivation, unpublished doctoral dissertation, University of Michigan, 1953.

95 Rosen and R. D'Andrade, "The Psychosocial Origins of Achievement Motivation," Sociometry, Vol. 22, 1959, p. 185-218.

96 Kagan and Moss, op. cit.

97 Crandall, "Personality Characteristics [...]," 1966, p. 477-486.

less ability to achieve in skill areas in a free-play setting, had lower expectancies of success in achievement situations, performed less well on standardized achievement tests, and indeed tended to avoid participating in achievement activities. Thus, it is not surprising to find that boys who are highly motivated to obtain a favorable response from others are those who have been subjected to fewer accelerational attempts by their mothers. Not being able to obtain satisfaction from their own endeavors, they compensate by exhibiting the proper, socially acceptable behavior and attitudes expected of them from significant others in their environment.

Children acquire the skills necessary to obtain satisfaction from their own efforts through the development of independence. The child progresses from the helpless state of infancy where he depends on others to satisfy his needs to the stage where he associates drive reduction with his own exploration and manipulation of the environment. Overprotection and too much help and contact from the parent will impede this progression.⁹⁸ Thus, it is not surprising to find that restrictive child-rearing practices are positively associated with dependency in early and middle

⁹⁸Beller, op. cit., p. 25-27.

childhood, adolescence, and in adulthood^{99,100,101,102,103} and that boys with low achievement motive scores have more restrictions put on their behavior.¹⁰⁴

A lack of warmth or hostility, child-rearing behavior associated with high social desirability responding and conforming, compliant, norm-oriented behavior, is also positively related to the development of dependency in children.^{105,106,107} Marshall¹⁰⁸ found that the greater the

99 Levy, op. cit.

100 G. Watson, "Some Personality Differences in Children Related to Strict or Permissive Parental Discipline," Journal of Psychology, Vol. 44, 1957, p. 227-249.

101 Kagan and Moss, op. cit.

102 W. McCord, J. McCord and P. Verden, "Familial and Behavioral Correlates of Dependency in Male Children," Child Development, Vol. 33, 1962, p. 313-326.

103 C.L. Winder and L. Rau, "Parental Attitudes Associated with Social Deviance in Preadolescent Boys," Journal of Abnormal and Social Psychology, Vol. 64, 1962, p. 418-424.

104 Winterbottom, op. cit.

105 J.R. Wittenborn, "A Study of Adoptive Children: Relationship between Some Aspects of Development and Some Aspects of Environment for Adoptive Children," Psychological Monographs, Vol. 70, No. 3, 1956, p. 93-115.

106 R.R. Sears, E.E. Maccoby and H. Levin, Patterns of Child Rearing, Evanston, Row, 1957.

107 McCord, McCord and Verden, op. cit., p. 313-326.

108 H.R. Marshall, "Relations between Home Experiences and Children's Use of Language in Play Interactions with Peers," Psychological Monographs, Vol. 75, No. 5, 1961.

parent's 'interpersonal distance' from the child, the higher was the frequency of teacher-contacting among nursery school aged girls, behavior that has been shown to decline with age.¹⁰⁹ Conversely, Hatfield et al.¹¹⁰ showed that nursery school children who received more maternal warmth were more likely to show independence in interaction sessions with their mothers.

Winterbottom¹¹¹ and Rosen and D'Andrade¹¹² also provide evidence indicating parental warmth is associated with independence in that parents of sons with high achievement motive scores were more likely to use physical manifestations of affection like hugging and kissing. The conclusion appears to be that parents and especially mothers, who display much warmth and affection, stress early independence training, and put few restrictions on their sons' behavior, produce children with high achievement motivation. Thus, it appears that those boys who become concerned about others' acceptance of them are those who have not been able to develop the skills necessary to achieve success due to their

109 Heathers, op. cit., p. 37-57.

110 J.S. Hatfield, L.R. Ferguson and R. Alpert, "Mother-Child Interaction and the Socialization Process," Child Development, Vol. 38, 1967, p. 365-414.

111 Winterbottom, op. cit.

112 Rosen and D'Andrade, op. cit., p. 185-218.

own efforts. This deficiency is apparently the result of a relative lack of the development of independence that in the developmental literature is associated with greater maternal restrictiveness. This behavior, along with severe punitiveness and coercion, may be caused by the mother's difficulty in accepting the preschool male's efforts to assert autonomy or to express his own will as he becomes more difficult to handle,¹¹³ or it may be a result of her anxiety about injury to the child as he attempts to explore and manipulate the environment. In this way the components of independence do not become reinforced, and may instead become associated with anxiety.¹¹⁴ At any rate, the child will fail to develop his skills sufficiently so the parent will likely be maintained as a somewhat omnipotent satisfier of needs. Therefore, it is not surprising that such a child will show excessive concern with what his parents and, through generalization, others think of him.

The literature analyzed in this chapter indicates that those child-rearing practices Crandall found significantly correlated with high social desirability response tendencies in boys are also those that predict the behavioral

113 Crandall, "Maternal Antecedents [...]," 1966-1968, p. 81.

114 Beller, op. cit., p. 27.

and attitudinal inclinations or predilections mediated by the need for approval concept. That is, male children who have been subjected to such antecedent maternal behaviors as relatively greater restrictiveness, punitiveness, and coercion and to a greater lack of affection and lack of approval are the ones more likely to display the characteristics that correspond to the expectations of significant others in their environment--compliance, conformity, little aggression, neatness, obedience, and politeness, and the tendency to yield to the false judgements of others in a group pressure situation. They are also more likely to evidence more repression, denial and the defensive behaviors characteristic of the approval-motivated adult and child.

In addition, the developmental literature has supported the finding that those subjected to more frequent and earlier acceleration attempts display more achievement that is negatively related to the tendency to respond in a socially desirable manner, and those who have had little opportunity to develop independence evidence little achievement. Finally, the development of independence has been negatively associated with the amount of restriction and positively associated with the amount of warmth displayed by the parent. Restrictiveness prevents the child from acquiring the skills necessary to satisfy his needs and thus he will depend on other adults for this purpose. In summary,

it can be said that little warmth, in addition to high restrictiveness and punitiveness, has been positively related to both high dependency and high social desirability responding.

Having reached certain conclusions regarding the child-rearing antecedents of both the social desirability response and the behaviors predicted by a knowledge of such response tendencies, it is now easier to explain why those with certain positions on demographic variables exhibit more approval-dependent behavior than do others.

For example, in most studies, girls have made significantly higher scores on the CSD scale. Indeed, in no case, do boys give more socially desirable responses even when the levels do not reach significance statistically.¹¹⁵ At the same time, it is generally known girls are the objects of a greater severeness or harshness of discipline than boys, the child-rearing antecedents most correlated with the exhibition of approval-motivated behavior. In the Crandall¹¹⁶ study, for example, although none of the differences in maternal behaviors attained the level of statistical significance, on most of the socialization practices most

115 Crandall, "Maternal Antecedents [...]," 1966-1968, p. 82.

116 Ibid.

consistently related to concern with approval-disapproval and its behavioral correlates, girls' mothers had higher scores. Specifically, the mothers were more coercive, punitive, restrictive and critical in relation to their daughters than to their sons. Conversely, boys received more warmth and approval than girls. Thus, it is not surprising to find girls are more sensitive to social situations and expectations,¹¹⁷ more obedient, conventional and polite in their behavior,^{118,119} hold fewer social private and public attitudes and suppress the expression of socially unacceptable attitudes to a greater degree than do boys.¹²⁰

Similarly, it was reported earlier that only children and first-borns, who are subjected to more restriction, reveal a greater amount of suppression of publicly unacceptable attitudes¹²¹ and modified their judgements more in the direction of a fictitious group norm than did subjects born later into a family.¹²²

117 Witryol, op. cit., p. 271-326.

118 Jersild and Tasch, op. cit.

119 Jersild and Markey, op. cit.

120 Getzels and Walsh, op. cit.

121 Ibid.

122 Ehrlich, op. cit.

4. Differential Incentive Effects

Evidence presented earlier showed those characterized by a high need for social approval behave differently in a wide variety of similar situations than those low in the need for approval. This section will provide evidence suggesting these two types of subject groups should respond differentially to incentives involving the same task.

Constructs utilized in the area of incentive research include reward, reinforcement, reinforcement value, incentive, goal expectation, etc. Thus, in order to clarify the meaning of the concept 'incentive' one must define the terms intrinsically related to it. Witryol states, "incentive is a construct which accounts for the anticipation of reward following experiences with the reward."¹²³ In an earlier publication, Witryol et al. claimed that

antecedent to this construct is the definition of a reinforcement condition or reward condition as an event that increases the probability of response. This increase in probability is the measurable aspect of the incentive construct.¹²⁴

Similarly, Resse and Lipsitt state that "a stimulus that elicits expectations of reward can be called an incentive

¹²³ L. Witryol, "Incentives and Learning in Children," in H.W. Reese (ed.), Advances in Child Development and Behavior, Vol. 6, New York, Academic Press, 1971, p. 4.

¹²⁴ S.L. Witryol, D.J. Tyrrell and L.M. Lowden, "Development of Incentive Values in Childhood," Genetic Psychology Monographs, Vol. 72, 1965, p. 203.

stimulus."¹²⁵

There also appears to be a general consensus that the way expectations are learned is through classical conditioning. That is, one expects another event to occur when a given event happens because the latter has always preceded the former in the past. For example, Reese and Lipsitt¹²⁶ use the illustration of a child expecting dinner in his home at about 6 p.m. when his mother calls out the word 'dinner' because this stimulus pattern has preceded the eating of dinner in the past. As a result it elicits part of the response pattern previously elicited only by the dinner itself.

The most common explanation of the effects of anticipation or expectation of reward on performance is that it provides a motivational increment to the drive level of the subject that multiplies reactive tendencies. This is the construct of incentive motivation \underline{K} in the Hull-Spence system.¹²⁷ One of the variables assumed to increase the value of \underline{K} is the value of the reward for the particular subject. Thus, one is expected to perform better

125 H.W. Reese and L.P. Lipsitt, Experimental Child Psychology, New York, Academic Press, 1970, p. 320.

126 Ibid.

127 K.W. Spence, Behavior Theory and Conditioning, New Haven, Yale University Press, 1956, p. 133-137.

in anticipation of a preferred reward than if expecting a less preferred reward because the habit of performing the task is multiplied by a higher value of K .

Another common way to explain why incentives improve performance is that the subject is oriented to pay more attention to the relevant cues and responses necessary for a good performance in the proper situation.^{128,129} Furthermore, Elliot¹³⁰ states that attention is enhanced through the effect a high incentive level has in decreasing reaction time and in reducing body restlessness over trials.

Earlier attempts to measure the effects of various incentives on human learning and performance involved using the same incentives arbitrarily for all subjects and, as a result, contradictory and inconclusive results were often found. For example, Gilchrist¹³¹ found praise more effective than reproof with college students. Chapman and

128 N.A. Stillings, G.A. Allen and W.K. Estes, "Reaction Time as a Function of Noncontingent Reward Magnitude," Psychonomic Science, Vol. 10, 1968, p. 337-338.

129 Reese and Lipsitt, op. cit., p. 190.

130 R. Elliot, "Simple Reaction Time: Effects Associated with Age, Preparatory Interval, Incentive--Shift and Mode of Presentation," Journal of Experimental Child Psychology, Vol. 9, 1970, p. 101-103.

131 E.P. Gilchrist, "The Extent to which Praise and Reproof Affect a Pupil's Work," School and Society, Vol. 4, 1916, p. 872-874.

Feder¹³² found similar results with ten-year-old boys using arithmetic problems as the task. Using the same complex task, Hurlock¹³³ found a praised group of fourth- and sixth-grade girls performed better than a reproofed group who similarly were superior to an ignored and a control group. In a later study,¹³⁴ children under conditions of rivalry and recognition for achievement did better on arithmetic problems after five consecutive daily sessions than children not subjected to these conditions.

On the other hand, Hurlock¹³⁵ found no differences between elementary school children who were subjected to praise and reproof and Auble and Mech¹³⁶ showed that on a routine task a nonrewarded control group learned faster than subjects who were praised.

132 J.C. Chapman and R.B. Feder, "The Effect of External Incentives on Improvement," Journal of Educational Psychology, Vol. 8, 1917, p. 469-474.

133 E.B. Hurlock, "An Evaluation of Certain Incentives Used in School Work," Journal of Educational Psychology, Vol. 16, 1925, p. 145-159.

134 -----, "The Use of Group Rivalry as an Incentive," Journal of Abnormal and Social Psychology, Vol. 22, 1927, p. 278-290.

135 -----, "The Value of Praise and Reproof as Incentives for Children," Archives of Psychology, Vol. 11, No. 71, 1924.

136 D. Auble and E.V. Mech, "Differential Reinforcement Related to the Frequency of Error and Correct Responses," Journal of Psychology, Vol. 35, 1953, p. 307-312.

Studies comparing the effects of various material and/or verbal incentives have yielded similar inconclusive results. For example, Abel¹³⁷ found ten-year-old children learned an elevated finger-maze fastest with the promise of twenty-five cents as an incentive compared to a penny reward, a verbal reward, and no reward, with effectiveness in that order. Similarly, Mischel¹³⁸ demonstrated that children, as they advanced in age from seven to nine years, showed an increasing preference for a ten-cent candy given one week later, rather than a one-cent candy delivered immediately.

Conversely, in testing the effectiveness of five incentives, praise, immediate candy, delayed candy, reproof and a flashlight in a concept learning task, Terrell and Kennedy¹³⁹ found only the subjects rewarded with immediate candy learned significantly faster than those under all other conditions. It should also be noted this is another instance in which a praised group did not perform

137 L.B. Abel, "The Effects of Shift in Motivation upon the Learning of a Sensory-Motor Learning Task," Archives of Psychology, Vol. 29, No. 205, 1936.

138 W. Mischel, "Preference for Delayed Reinforcement: An Experimental Study of a Cultural Observation," Journal of Abnormal and Social Psychology, Vol. 56, 1958, p. 57-61.

139 G. Terrell and W.A. Kennedy, "Discrimination Learning and Transposition in Children as a Function of the Nature of the Reward," Journal of Experimental Psychology, Vol. 53, 1957, p. 257-260.

significantly better than a control group.

From this brief review, it appears different subjects respond to the same incentives in different ways and experimenters should look to the effect of personality differences, age differences, differences in social backgrounds, etc., on responses made to these stimuli. That is, individuals should differ in the degree to which they exert themselves for a given incentive and this effort should be determined by such factors as one's mental capacity, temperamental habits and attitudes, emotional states, the drive induced by the conditions of the experiment, and the differential past learning of incentive motivation.

i. Class Differences

Several investigators have looked to the importance of social-class membership as a determinant of the responsiveness of young children to various types of incentives. This interest has been initiated by the differences in child-rearing practices between the two major social-class groups reported in the literature; differences that, as postulated by these investigators, would lead to fundamental dissimilarities in goal orientation between middle-class and lower-class children.

The major differences in child-training practices revolve around the areas of the learning of achievement

motivation and the development of internalized controls.¹⁴⁰ Ericson¹⁴¹ and Havinghurst and Davis,¹⁴² for example, found the standards of norms for early and consistent personal attainment are more demanding for middle-class children than lower-class children and they are subjected to more pressures and probably made more anxious as a result of these pressures. Thus, in the training of middle-class children there is a greater emphasis on learning for learning's sake and the idea one must improve himself by learning than in that of lower-class children. Consequently, middle-class children should be more influenced than lower-class children by abstract, symbolic reinforcers that merely give some indication they are progressing. That is, cues associated with successful completion of tasks should be more motivating for middle-class children than for their lower-class counterparts.

Douvan¹⁴³ found, for example, that middle-class children produced more achievement imagery after a failure

140 E. Douvan, "Social Status and Success Striving," Journal of Abnormal and Social Psychology, Vol. 52, 1956, p. 219-223.

141 M.C. Ericson, "Social Status and Child-Rearing Practices," in T.M. Newcomb and E.L. Hartley (eds.), Readings in Social Psychology, New York, Holt, 1947, p. 494-501.

142 R.J. Havinghurst and A. Davis, "Social Class and Color Differences in Child Rearing," American Sociological Review, Vol. 11, 1941, p. 698-710.

143 Douvan, op. cit., p. 219-223.

experience, defined as not achieving an abstract norm, than did lower-class children. On the other hand, there were no differences in level of achievement motivation between the two social-class groups when a sum of money was promised in addition to the abstract incentive. That is, the level dropped for lower-class subjects when the material reward was absent and that of the middle-class children remained at approximately the same high level, thus indicating more autonomous and generalized success strivings in the latter group of subjects. In addition, Terrell and Kennedy,¹⁴⁴ Terrell,¹⁴⁵ Safer and Kornreich,¹⁴⁶ and Terrell, Durkin and Wiesley¹⁴⁷ showed middle-class children performed better under conditions of performance feedback and symbolic reinforcement signalling progress and lower-class children learned more quickly when given material rewards.

144 Terrell and Kennedy, op. cit., p. 257-260.

145 G. Terrell, "The Role of Incentive in Discrimination Learning in Children," Child Development, Vol. 29, 1958, p. 231-236.

146 M.A. Safer and L.B. Kornreich, "The Interaction of Social Class and Type of Reinforcement in Discrimination Learning," Psychonomic Science, Vol. 11, 1968, p. 206.

147 G. Terrell, K. Durkin and M. Wiesley, "Social Class and the Nature of the Incentive in Discrimination Learning," Journal of Abnormal and Social Psychology, Vol. 59, 1959, p. 270-272.

Zigler and Kanzer¹⁴⁸ have interpreted some of the above studies, including some of the work done on child-rearing practices, as indicating that middle-class and lower-class children will respond differentially to the degree to which a verbal reinforcer emphasizes a correctness connotation or a praise connotation. That is, other studies have indicated 'being correct' is more reinforcing for middle-class than for lower-class children due to the former's training having a greater emphasis on being right for right's sake alone. Furthermore, Zigler, Hodgden and Stevenson¹⁴⁹ showed the performance of children drawn from the middle class was not lengthened by verbal reinforcers having primarily a praise connotation, although they did lengthen the performance of lower-class children. In line with this theorizing, Zigler and Kanzer¹⁵⁰ found the verbal reinforcers 'good' and 'fine' connoting praise were more effective with lower-class children in a marble-dropping task than were the reinforcers implying correctness or accuracy ('right', 'correct') and the reverse was true for middle-class subjects.

148 E. Zigler and P. Kanzer, "The Effectiveness of Two Classes of Verbal Reinforcers on the Performance of Middle- and Lower-Class Children," Journal of Personality, Vol. 30, 1962, p. 157-163.

149 E. Zigler, L. Hodgden and H. Stevenson, "The Effect of Support on the Performance of Normal and Feeble-minded Children," Journal of Personality, Vol. 26, 1958, p. 106-122.

150 Zigler and Kanzer, op. cit., p. 157-163.

These findings are substantiated by the results of a somewhat different experiment by Swingle and Coady.¹⁵¹ In this study, children of three ages from the two social-class groups were offered one of the four incentive conditions, control, money, verbal and verbal plus money to perform on a lever-pressing task. The results showed middle-class children performed better for the verbal incentive than for the monetary incentive. In addition, when the material incentive was added to that of the verbal one, there was no significant difference in performance between this condition and the one in which only a verbal incentive was used. Furthermore, the control condition was no less effective than the monetary incentive for middle-class children. On the other hand, lower-class children performed more poorly in the control than in all the other three conditions where performances did not differ significantly.

The fact subjects in the verbal incentive condition were told the experimenter would say 'good' to indicate how well they were doing in pressing the lever to make a light flash and those in the money condition were told they would receive more money the more often they made the light flash indicates middle-class children, as opposed to their

151 G. Swingle and H.V. Coady, "Social Class, Age, and the Nature of the Incentive in Children's Lever-Pressing Performance," Canadian Journal of Psychology, Vol. 23, 1969, p. 41-48.

lower-class counterparts, are more responsive to whatever cues are available to signal progress and other additional incentives do not bring about a superior performance. This conclusion is enhanced by the fact the control condition included the light flash that can be categorized as an abstract signal symbolic of progress.

ii. Age Differences

One of the demographic variables found to be a determinant of the type of incentive to which a child will respond best is age. Since it requires various degrees of cognitive maturity to ascertain the meaning of the various incentives and since rewards acquire differential culturally derived extrinsic value through learning, differences in the efficacy of the various incentives should be expected to change with age.

There is evidence to suggest younger children are less responsive than older children to more symbolic incentives that provide information that one is correct, as opposed to more concrete, personal, and tangible incentives. McCullers and Stevenson¹⁵² with three-, four- and eight-year-

¹⁵² J.C. McCullers and H.W. Stevenson, "Effects of Verbal Reinforcement in a Probability Learning Situation," Psychological Reports, Vol. 7, 1960, p. 439-445.

olds, Lewis, Wall and Aronfreed¹⁵³ with seven- and eleven-year-olds, and Horowitz,¹⁵⁴ dividing elementary school children into a group from the first four grades and another group from grades five and six, provide evidence the older children had a higher level of correct responding to such signal reinforcers as a buzzer, marble or light, and the younger children responded more to praise.

These results imply that younger children are motivated more by the secondary reinforcing properties of social reinforcement (praise), indicating the physical aspects of the dependency of just a few years earlier is still available, and by primary reinforcers than by more symbolic cues that suggest to the child he is performing a task correctly. Beller¹⁵⁵ and Heathers¹⁵⁶ also have shown the reinforcers of praise and attention are effective with younger children since they seek direct praise for themselves rather than approval for their accomplishments. In contrast, the

153 M. Lewis, A.M. Wall and J. Aronfreed, "Developmental Change in the Relative Values of Social and Non-social Reinforcement," Journal of Experimental Psychology, Vol. 66, 1963, p. 133-137.

154 F.D. Horowitz, "Social Reinforcement Effects on Child Behavior," The Young Child: Reviews of Research, published by the National Association for the Education of Young Children, 1967.

155 Beller, op. cit., p. 25-35.

156 Heathers, op. cit., p. 37-57.

results indicate that as children grow older they are more likely to be influenced by reinforcers intrinsically related to their own responses that serve as cues for the administration of self-reinforcement and that they rely less heavily on tangible, external reinforcers as they progress from dependency to independence.¹⁵⁷ Older children develop increasingly strong secondary and tertiary reinforcement values more related to the performance than to the performer.

This is substantiated in a study by Rosenhan and Greenwald¹⁵⁸ who found there were no differences in responsiveness to person reinforcers ('good' and 'fine') between second- and sixth-grade children, but that the older children were more responsive than younger children to the performance reinforcers of 'right' and 'correct!'. Furthermore, Witryol and Ormsby¹⁵⁹ found that two verbal incentives, one suggesting social competition and the other self-competition, ranked last in preference to bubble gum, a nickel, and M and M candy for kindergarten children but

157 Zigler and Kanzer, op. cit., p. 161.

158 D. Rosenhan and J.A. Greenwald, "The Effects of Age, Sex and Socioeconomic Class on Responsiveness to Two Classes of Verbal Reinforcement," Journal of Personality, Vol. 33, 1965, p. 108-121.

159 L. Witryol and E.L. Ormsby, Age Trends in Children's Incentives Scaled by Paired Comparison, Paper read at meetings of the Eastern Psychological Association, Philadelphia, April, 1961.

first for children in grades three to six.

In an eighty-trial five-choice selective learning task,¹⁶⁰ boys and girls in the first, third and fifth grades were allowed to accumulate as many of the five rewards of bubble gum, penny, charm, verbalism ('Good boy, I like that one too'), and nothing as they preferred. The results showed the charm and bubble gum was chosen more often as the test proceeded by first-grade subjects who decreased their choice of the verbal incentive and nothing. On the other hand, there was a significant tendency for the boys and girls combined to increase their choice of the verbal incentive over trials as a function of age. Thus, the verbal incentive increase in value with age, although higher-rank positions were generally attained by the material reinforcements. These results are in accord with the notion older children develop an internalized need to be correct.

So are the results of the following studies. Walters and Foote¹⁶¹ with six- and seven-year-olds; Jeffrey and Skager¹⁶² with seven-year-olds; Siegel and

160 Witryol, Tyrrell and Lowden, op. cit., p. 201-246.

161 R.H. Walters and A. Foote, "A Study of Reinforcer Effectiveness with Children," Merrill-Palmer Quarterly of Behavior and Development, Vol. 8, 1962, p. 149-157.

162 W.E. Jeffrey and R.W. Skager, "Effect of Incentive Conditions on Stimulus Generalization in Children," Child Development, Vol. 33, 1962, p. 865-870.

Andrews¹⁶³ with preschoolers; Miller and Estes¹⁶⁴ with nine-year-olds; Estes, Miller and Curtin¹⁶⁵ with college students; and Stevenson and Weir¹⁶⁶ with children between three and seven, all found younger children show a greater concern with the utility and instrumentality of their behaviour in obtaining externally-administered, tangible, material, and social rewards; and older children develop an increasing tendency to be more affected by the intrinsic value of the assignment and the effort it entails. Some previous research has indicated there are such differences among mature individuals in their approach to experimental tasks.

Swingle and associates have produced evidence that reveals extrinsic motivation inhibits the response rate of self-motivated subjects. Using six male college students in a lever-pressing situation to accumulate points, Swingle,

163 S. Siegel and J.M. Andrews, "Magnitude of Reinforcement and Choice Behavior in Children," Journal of Experimental Psychology, Vol. 63, 1962, p. 337-341.

164 L.B. Miller and B.W. Estes, "Monetary Reward and Motivation in Discrimination Learning," Journal of Experimental Psychology, Vol. 61, 1961, p. 501-504.

165 B.W. Estes, L.B. Miller and M.W. Curtin, "Supplementary Report: Monetary Incentive and Motivation in Discrimination Learning--Sex Differences," Journal of Experimental Psychology, Vol. 63, 1962, p. 320.

166 H.W. Stevenson and M.W. Weir, "Developmental Changes in the Effects of Reinforcement and Non-Reinforcement of a Single Response," Child Development, Vol. 32, 1961, p. 1-5.

Coady and Moors¹⁶⁷ found the incentive denoting self-competition increased between-subject variability compared to those specifying social competition, social competition for monetary reward, comparison with a class norm, and a monetary incentive.

In a follow-up experiment,¹⁶⁸ using two separate samples of subjects assumed to be highly or poorly motivated on the basis of their response rate during the last five trials of a twenty-trial baseline period in which points having no monetary value were accumulated, similar results were obtained. On the succeeding twenty trials divided into four five-trial blocks, where a monetary incentive was added, the fast responders showed a response rate that dropped below the last five trials of the baseline level on more of the five trial blocks than did the slow responders. In fact, the latter showed a marked increase in rate and the fast group was almost identical to their baseline level of responses per second. Furthermore, when the monetary incentive was dropped during the third phase of twenty trials, the rate

167 P.G. Swingle, H. Coady and D. Moors, "The Effects of Performance Feedback, Social and Monetary Incentive upon Human Lever Pressing Rate," Psychonomic Science, Vol. 4, 1966, p. 209-210.

168 P.G. Swingle and D. Moors, "The Effects of Small Monetary Incentive upon Human Lever-Pressing Rates," Psychonomic Science, Vol. 9, 1967, p. 205-206.

of the slow group dropped and that of the fast group increased.

The results of these studies indicate individuals enter experimental situations with different motives and different approaches to their assignment. Those motivated by an interest in the task per se appear to do well under conditions of performance feedback or self-competition only since they are concerned with problem-solving and the introduction of an added reward presumably alters the nature of the task. On the other hand, individuals less intrinsically motivated need a social or material incentive to increase response rate. This effect was also seen in investigations by Jones,¹⁶⁹ Muenzinger¹⁷⁰ and Terrell.¹⁷¹

iii. Personality Differences and Differences
Induced by the Conditions of the Experiment

There is also a growing body of evidence indicating groups of children from different backgrounds, those differing in long-term life experiences, those subjected to differing experimental conditions, and those with different

169 H.E. Jones, "Trial and Error Learning with Differential Cues," Journal of Experimental Psychology, Vol. 35, 1945, p. 31-45.

170 K.F. Muenzinger, "Motivation in Learning. II. The Function of Electric Shock for Right and Wrong Responses in Human Subjects," Journal of Experimental Psychology, Vol. 17, 1934, p. 439-448.

171 Terrell, op. cit., p. 231-236.

reinforcement histories do differentiate between incentives and do not value incentives in the same way. Some rewards are an incentive for one child but not for another. One positive reinforcer should not be considered the functional equivalent of any other positive reinforcer.¹⁷²

This conclusion is supported by the fact studies concerned with the influence of different incentives on children's performance have continually resulted in strong individual differences obtained for every reward value, reflecting the differential historical conditioning of the subjects. For example, in the study by Witryol and associates¹⁷³ noted above, significant subject variances at the 0.01 level of probability or better were found on each incentive condition including the control, strongly reflecting individual differences. In addition, Brackbill and Jack¹⁷⁴ found children able to preselect one preferred reward from three (candy, marbles, or trinkets), showed significantly less variability in performance on a discrimination task than a group of children all given the reward

172 Zigler and Kanzer, op. cit., p. 157.

173 Witryol, Tyrrell and Lowden, op. cit., p. 201-246.

174 Y. Brackbill and D. Jack, "Discrimination Learning in Children as a Function of Reinforcement Value," Child Development, Vol. 29, 1958, p. 185-190.

determined by the experimenter (candy); suggesting the use of individually-determined reinforcers will reduce the size of the within-group variability usually found when some particular reinforcer is arbitrarily employed for all children. Differential incentive value is also seen in a study by Bisett and Rieber¹⁷⁵ who ranked preferences of the subjects for eight incentives and then assigned half to their most-preferred incentive and the other half to their least-preferred incentive. The results showed the latter group learned a discrimination task significantly slower than the former.

The findings of an early attempt to show the effectiveness of any incentive is affected by the personality differences of the subjects¹⁷⁶ indicate that when subjected to competitive conditions, young, nervous and excitable subjects are prone to overstimulation through rivalry and are, consequently, less efficient. Later studies have also shown the personality of the child is an important variable in determining differential incentive effectiveness. For

175 B.M. Bisett and M. Rieber, "The Effects of Age and Incentive Value on Discrimination Learning," Journal of Experimental Child Psychology, Vol. 3, 1966, p. 199-206.

176 N. Triplett, "The Dynamogenic Factors in Pace-making and Competition," American Journal of Psychology, Vol. 9, 1897-1898, p. 507-533.

example, Bird¹⁷⁷ reported some children with habitual personality handicaps were delayed in progress in learning to read when praise was not forthcoming and others performed better with admonition. Grace¹⁷⁸ also showed that, on a learning task, persons responding best to any one of three types of approval associated with correct performance, i.e., positive, negative, or neutral statements, also had slightly different patterns of personality characteristics. Furthermore, Forlano and Axelrod¹⁷⁹ found blame or disapproval from the teacher and the children in the classroom increased the scores of introverts after the first of three trials on a number-cancellation task, and only after the second trial in the case of extroverts. On the other hand, praise or approval did not have any differentiating effect on these two categories of personality types. In addition, on the first application of blame, introverts produced larger gains than extroverts and on the second application extroverts

177 G.E. Bird, "Personality Factors in Learning," Personnel Journal, Vol. 6, 1927, p. 56-59.

178 G.L. Grace, "The Relation of Personality Characteristics and Response to Verbal Approval in a Learning Task," Genetic Psychology Monographs, Vol. 37, 1948, p. 73-103.

179 G. Forlano and H.C. Axelrod, "The Effect of Repeated Praise or Blame on the Performance of Introverts and Extroverts," Journal of Educational Psychology, Vol. 28, 1937, p. 92-100.

produced the larger increment. Praise had the exact opposite effect on the comparative performance of introverts and extroverts during the first two trials. In a more recent study, the results of Colquhoun and Corcoran¹⁸⁰ using adults as subjects showed there was a positive correlation between output on a letter-cancellation task and degree of introversion in morning test sessions when subjects worked alone, but no such relationship when the subjects were grouped together.

The individual differences each child brings into an experimental situation are one determinant of the effectiveness of a given incentive. Endsley,¹⁸¹ for example, showed low-dependent pre-school children remained voluntarily in a socially reinforced task for a shorter period of time than high- and moderately-dependent subjects, and, in a simple two-hole marble dropping task, Parton and Denike¹⁸² found

180 W.P. Colquhoun and D.J. Corcoran, "The Effects of Time of Day and Social Isolation on the Relationship between Temperament and Performance," British Journal of Social and Clinical Psychology, Vol. 3, 1964, p. 226-231.

181 R.C. Endsley, "Dependency and Performance by Preschool Children on a Socially Reinforced Task," quoted by F.O. Horowitz, "Social Reinforcement Effects on Child Behavior," op. cit., 1967, p. 34-35.

182 A. Parton and L.D. Denike, "Performance Hypotheses of Children and Response to Social Reinforcement," Journal of Personality and Social Psychology, Vol. 4, 1966, p. 444-447.

performance gains only among children who indicated in a subsequent interview they worked to win praise. This gives further support to Crowne and Marlowe's¹⁸³ contention rewards act in the service of needs.

The studies reported above indicate the subject does not act passively in an experiment, unaffected by any ingrained characteristics; rather, they tend to suggest he actively seeks reward according to his needs.

The literature also contains evidence the reward value of a particular reinforcer is partially dependent on experiences undergone by the subject just prior to the testing situation. One relevant body of studies involves the use of experimental procedures that manipulate the normal child's desire for social approval by isolation and others designed to provide varying degrees of deprivation and satiation of social approval for the child. As Crowne and Marlowe¹⁸⁴ state, reinforcement acts in the service of needs, thus making more effective the reinforcement appropriate to that need, the stronger is the given need. If we assume normal children have received much social approval, prior to entering the experimental situation, for interacting with adults in a well-behaved, good, conscientious manner, then

183 Crowne and Marlowe, The Approval Motive, p. 47.

184 Ibid.

any deprivation of this social approval should lead to an increment in social reinforcement. Conversely, subjects satiated with social approval will not engage in such behaviors.

The results confirm this prediction. Gewirtz and Baer^{185,186} studying the influence of deprivation and satiation on the effectiveness of social reinforcement found prior isolation increased effectiveness and satiation reduced it. Stevenson and Odom's¹⁸⁷ results were similar, as were those of Lewis and Richman,¹⁸⁸ and Kozma¹⁸⁹ using binary-prediction tasks as a test of approval-contingent performance.

185 J.L. Gewirtz and D.M. Baer, "The Effect of Brief Social Deprivation on Behaviors for a Social Reinforcer," Journal of Abnormal and Social Psychology, Vol. 56, 1958, p. 49-56.

186 J.L. Gewirtz and D.M. Baer, "Deprivation and Satiation of Social Reinforcers as Drive Conditions," Journal of Abnormal and Social Psychology, Vol. 57, 1958, p. 165-172.

187 H.W. Stevenson and R.D. Odom, "The Effectiveness of Social Reinforcement Following Two Conditions of Social Deprivation," Journal of Abnormal and Social Psychology, Vol. 65, 1962, p. 429-431.

188 M. Lewis and S. Richman, "Social Encounters and their Effect on Subsequent Social Reinforcement," Journal of Abnormal and Social Psychology, Vol. 69, 1964, p. 253-257.

189 A. Kozma, "The Effects of Anxiety, Stimulation, and Isolation on Social Reinforcer Effectiveness," Journal of Experimental Child Psychology, Vol. 8, 1969, p. 1-8.

Erickson,¹⁹⁰ using a noun-selecting task, also reported better performance for a social reward ('yes') after a social-isolation procedure, but no difference when the reward was marbles. These results could be expected from the Crowne and Marlowe formulation reinforcement appropriate to the need of the individual causes him to acquire the behavior to be learned.

This section has reviewed studies that have compared the effectiveness of various particular reinforcers and categories of reinforcers on subjects differing in personality characteristics, demographic positions and in short- or long-term experiences. The results tend to support the conclusion that one effect of the administration of incentives is to heighten the drive level of the subject and hence to make him perform better; but, that only those incentives relevant to the drive brought about by the conditions of the experiment and to the particular motivation the child brings to the experimental situation have this effect. Each individual has a motivation history of preferred incentives and performance should be better, poorer, or the same depending on how the individual reacts to the particular

190 M.T. Erickson, "Effects of Social Deprivation and Situation on Verbal Conditioning in Children," Journal of Comparative and Physiological Psychology, Vol. 55, 1962, p. 953-957.

incentive being employed. Therefore, the conclusion is that the past motivation level and characteristics the subject brings to the experimental situation interact with incentive value to determine the performance.

The purpose of this study is to discover if one source of the variability found when employing verbal social incentives is the differential level of the need for social approval of the subject. Because children increasingly seek approval for their accomplishments during childhood and high need for approval subjects have been shown to rely on social norms for their behavior, it should be expected that such eight- to ten-year-old subjects will perform better when an incentive suggesting comparison with a fictitious peer group norm is offered than when the possibility of a prize is verbalized, implying it will be awarded for performance above the norm, and a control condition in which no incentive is offered. On the other hand, low need for approval subjects should perform better when the prize is used as an incentive.

These expectations assume, as do Zigler and Kanzer,¹⁹¹ that verbal incentives can on a priori grounds be designated as primarily having a particular connotation, that the

191 Zigler and Kanzer, op. cit., p. 158-159.

results of several studies^{192,193} indicate children can discriminate and respond differentially to the semantic nuances connoted by various verbal incentives, and that the promise of a reward can enhance performance even when it has not yet been received in the experimental situation.^{194,195}

iv. Sex Differences

Since sex is to be a variable in this investigation, the literature was searched for evidence that boys and girls respond differentially to various incentives. Several studies suggest girls are more sensitive to social reinforcement than boys.

In a study of the effectiveness of prior isolation on approval contingent performance on a binary-choice task,¹⁹⁶ girls received more reinforcement, 'good', 'fine', 'right', 'very good', than did the boys. Lewis suggested that in this complex task it might be argued these third-grade girls were interested in obtaining reinforcement and the boys were

192 Ibid.

193 Rosenhan and Greenwald, op. cit., p. 108-121.

194 Abel, op. cit.

195 Mischel, op. cit., p. 57-61.

196 M. Lewis, "Social Isolation: A Parametric Study of its Effect on Social Reinforcement," Journal of Experimental Child Psychology, Vol. 2, 1965, p. 205-218.

more concerned with solving the problem.

Stevenson and Knights¹⁹⁷ discovered after testing institutionalized children in a six-hole marble-dropping task both immediately following a summer vacation with their families and twelve weeks after institutional residence, there was no difference in social reinforcer effectiveness for boys. On the other hand, girls were more responsive to the social reinforcers immediately after institutionalization. It appears institutionalization decreases the tendency of girls to respond in ways that bring about social reinforcement. Most important, it also suggests female children receive more social approval at home and thus experience more deprivation than males when placed in an institution. After a period of time during which responding in previously socially desirable ways is not subsequently reinforced, the effectiveness of social reinforcement diminishes.

In the eighty-trial, five-choice selective learning task reported above,¹⁹⁸ the stimulus yielding the verbal incentive increased significantly over trials only in the

197 H.W. Stevenson and R.M. Knights, "The Effectiveness of Social Reinforcement after Brief and Extended Institutionalization," American Journal of Mental Deficiency, Vol. 66, 1962, p. 589-594.

198 Witryol, Tyrrell and Lowden, op. cit., p. 201-246.

case of the fifth-grade girls. In all of the other five groups the verbal incentive ranked below the material rewards, although the verbal incentive for fifth-grade boys did not decline over trials as had the control condition. On the other hand, the boys showed a much greater increase in the choice of a penny than girls as the trials proceeded and the penny was the most frequently chosen reward in the last trial block.

On the basis of such evidence and since girls display more of the behavior predicted by the need for approval concept, score higher on the CSD scale, receive more of those child-rearing practices related to approval-motivated behavior and show greater achievement motivation only when social acceptance is stressed, it is to be expected they will perform best on a long boring task under the incentive condition that suggests a normative peer group standard. On the other hand, boys whose achievement motivation is higher in situations that emphasize successful competition should respond with their best performance when a prize is offered as an incentive.

CHAPTER II

EXPERIMENTAL DESIGN

The present chapter will describe the sample, the experimental procedures, the definitions of the independent and dependent variables and the hypotheses to be tested.

1. The Sample

A group of one hundred and twenty children, consisting of an equal number of boys and girls, served as subjects. They were selected on the basis of their scores on the forty-seven questions on the Children's Social Desirability Questionnaire.^{1,2}

The subjects were obtained from three elementary schools of the Ottawa Board of Education; the data were gathered between the dates of October 11, 1971 and December 20, 1971 inclusive.

The age range sampled extended from eight years, one month to nine years, eleven months as of November 15, 1971 and were in grades three to six inclusive. Children in special classes, those who had learning disorders, those who

1 Hereafter referred to as CSD questionnaire.

2 V.C. Crandall, V.J. Crandall and W. Katkovsky, "A Children's Social Desirability Questionnaire," Journal of Consulting Psychology, Vol. 29, 1965, p. 27-36.

wore eye glasses and those with known visual defects were excluded. Table I summarizes the description of the subjects.

2. Administration of the Questionnaire

Forty-seven questions devised by Crandall, Crandall and Katkovsky³ (questions and scoring key are shown in Appendix 1) were administered to approximately two hundred and fifty children. The Questionnaire was administered in a large room to all children from a given class in the specified age range. The examiner read aloud each question and asked the child to circle only one of the two answers on each of the questions. Children who circled both answers on a given question or who missed answering a question were excluded from further participation in the experiment.

The responses were scored for degree of social desirability by tabulating the number of times the child's answer corresponds to the undeviating socially desirable attitude or behavior as measured by the scoring key. A high score indicates the child has a high need for approval⁴ whereas a low score indicates a low need for approval.⁵

Subjects scoring in the zero to fifteen range were

3 Ibid.

4 Referred to as HNA.

5 Referred to as LNA.

Table I.
Age and CSD Scale Means
of the Subject Sample

Group	Age Mean (months)	CSD Scale Mean
Boys High Control	107	36
Girls High Control	109	39.9
Boys Low Control	110	13.2
Girls Low Control	110	11.7
Boys High Competitive	108	38.1
Girls High Competitive	106	41.3
Boys Low Competitive	109	14.5
Girls Low Competitive	107	11.9
Boys High Normative	106	38.3
Girls High Normative	106	41.8
Boys Low Normative	111	12.3
Girls Low Normative	107	13.1

assigned to the low need for approval category and those scoring thirty-two and above were categorized as high need for approval subjects; as a result, there were two need for approval groups (HNA and LNA) consisting of sixty subjects each with an equal number of boys and girls in each condition.

3. Administration of the Number-Cancellation Task

In the testing situation, children in groups of five were seated at small desks separated by portable cardboard partitions. They were brought individually from their respective home-classrooms by one of the school personnel to ensure anonymity. They were instructed (Appendix 2) to cancel threes and sevens on a sheet of random numbers as shown in Appendix 3 and urged to ask questions about the specific responses required of them. When all questions had been answered and the examiner was satisfied the responses required by the task were understood, the administration of three incentive conditions was presented verbally as shown in Appendix 2.

The experimental design provided for one-third of the subjects (ten boys and ten girls) at each of the two levels of need for approval to be randomly assigned to either a normative incentive, a competitive incentive, or to a control condition in which no incentive was offered. These

incentives were offered only before the first of twenty, three-minute trials of the number-cancellation task. Thereafter, the treatment of the subjects did not vary.

4. Statistical Design, Analysis of Behavior and Hypotheses

After the experiment had been completed, the number of threes and sevens cancelled for the different conditions were tabulated in four blocks of five trials each. An analysis of variance with a four-way classification was employed in which the data were subjected to a two (need for approval level of Ss) by three (incentive condition) by two (sex of Ss) by four (trial blocks) analysis. Since the primary concern of this study is to compare the effects of different incentives on children differing in personality and demographic characteristics, the null hypotheses are stated as follows:

1. There is no significant difference in the number of correct digits cancelled between the incentive conditions.
2. There is no significant difference in the number of correct digits cancelled between high and low need for approval subjects under the different incentive conditions.
3. There is no significant difference in the number of correct digits cancelled between male and female subjects under the different incentive conditions.

CHAPTER III

PRESENTATION OF RESULTS

This chapter will present the results of the experiment with special emphasis on the data relating to the hypotheses formulated at the end of the previous chapter. The general method will be to present an overall analysis of variance followed by a description of the relevant individual comparisons.

1. The Statistical Findings

A brief description will first be given of the definition of the response measure and of grouping of response data before it was subjected to statistical treatment.

The data to be reported are based on the total number of threes and sevens cancelled during each of the twenty three-minute trials. This data was grouped into four trial blocks with each block containing five trials; hence, trial blocks were used as an additional independent variable in the experimental design. Consequently, four factors were included in the analysis of variance: incentive (I), level of need for approval (A), sex (S), and trial blocks (T).

The summary for the analysis of variance is presented in Table II. The first null hypothesis was rejected; there was an incentive main effect ($F(2,108) = 4.49766$;

Table II.
Table of Variance of 4×5 Trial Blocks
of Number of Digits Cancelled

Source	Sums of Squares	df	Variance Estimate	F
Between				
I	10083.81641	2	5041.90625	4.49766*
A	176.41875	1	176.41875	.15738
IA	18394.54297	2	9197.26953	8.20448**
S	1383.80200	1	1383.80200	1.23443
IS	2249.21655	2	1124.60815	1.00321
AS	960.50195	1	960.50195	.85682
IAS	832.11646	2	416.05811	.37115
Subj. w. groups	121068.59497	108	1121.00511	
Within				
T	4692.32031	3	1564.10669	39.78379**
TI	620.58325	6	103.43054	2.63081*
TA	52.45624	3	17.48541	.44475
TIA	263.44995	6	43.90833	1.11683
TS	409.10620	3	136.36873	3.46860*
TIS	503.14990	6	83.85831	2.13298*
TAS	18.77290	3	6.25763	.15917
TIAS	745.18262	6	124.19710	3.15710**
Pooled inter- actions w. subjects	12738.11508	324	39.31517	

*p < 0.05
**p < 0.01

$p < 0.025$), the Duncan Multiple Range Test indicating that both the subjects receiving the competitive incentive and those receiving the normative incentive cancelled significantly more digits than did subjects in the control condition ($p < 0.01$). The more relevant effects of the incentives (Fig. 1) are further explained by the highly significant $I \times A$ interaction ($F(2,108) = 8.20448$; $p < 0.001$). This finding rejected the second null hypothesis: application of the Duncan Multiple Range Test demonstrates that HNA subjects cancelled significantly more digits ($p < 0.01$) in the normative incentive condition than in the competitive incentive or control conditions, no differences being found between the latter two groups; on the other hand, LNA subjects performed significantly better ($p < 0.01$) with a competitive incentive than when under the other two incentive conditions between which no reliable differences were found. Furthermore, the Duncan Multiple Range Test reveals that the normative incentive was significantly more effective for HNA than for LNA subjects whereas the reverse was true for the competitive incentive ($p < 0.01$). Another expected and highly significant main effect was that of trial blocks ($F(3,324) = 39.78379$; $p < 0.001$); the Duncan Multiple Range Test indicates that in each of the latter three trial blocks more digits were cancelled than in the first trial block ($p < 0.01$) and that significantly more digits were cancelled in the fourth trial

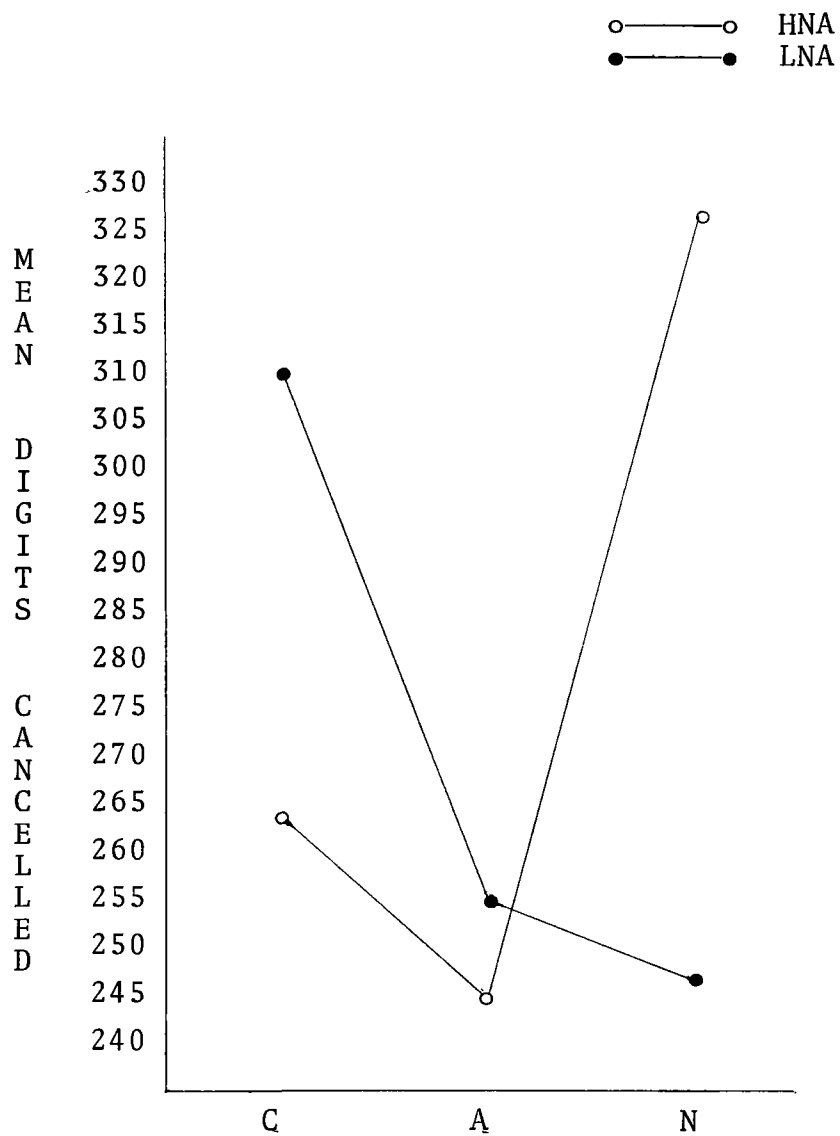


Figure 1 -- Representation of Mean Digits Cancelled for Subjects High and Low in Need for Approval under Control, Competitive and Normative Incentive Conditions.

C = Competitive
A = Control
N = Normative

block than in the second ($p < 0.05$). No differences were found between the second and third and between the third and fourth trial blocks.

As depicted in Figure 2, the significant $T \times S$ interaction ($F(3,324) = 3.4686$; $p < 0.025$) when subjected to the Duncan Multiple Range Test reveals that the performance of girls was significantly superior to that of boys on each of the first two trial blocks ($p < 0.01$), but on the last two no reliable differences were found. Furthermore, when comparing the performance of each sex with that on the immediately preceding trial block, the same test showed a tendency for boys to improve their performance and girls to remain at the same level. For boys, there was significant improvement on the first three successive trial blocks ($p < 0.01$); on the other hand, the girls' performance improved only to the end of the second trial block ($p < 0.01$). The remaining significant two-way interaction (Fig. 3) was that of $T \times I$ ($F(6,324) = 2.63081$; $p < 0.025$). Application of the Duncan Multiple Range Test reveals that on each of the four trial blocks both those subjects exposed to the normative incentive and the competitive incentive condition performed significantly better than the subjects in the control condition ($p < 0.01$); on the other hand, with the exception of the first trial block where those offered the normative incentive cancelled significantly more digits than the competitive

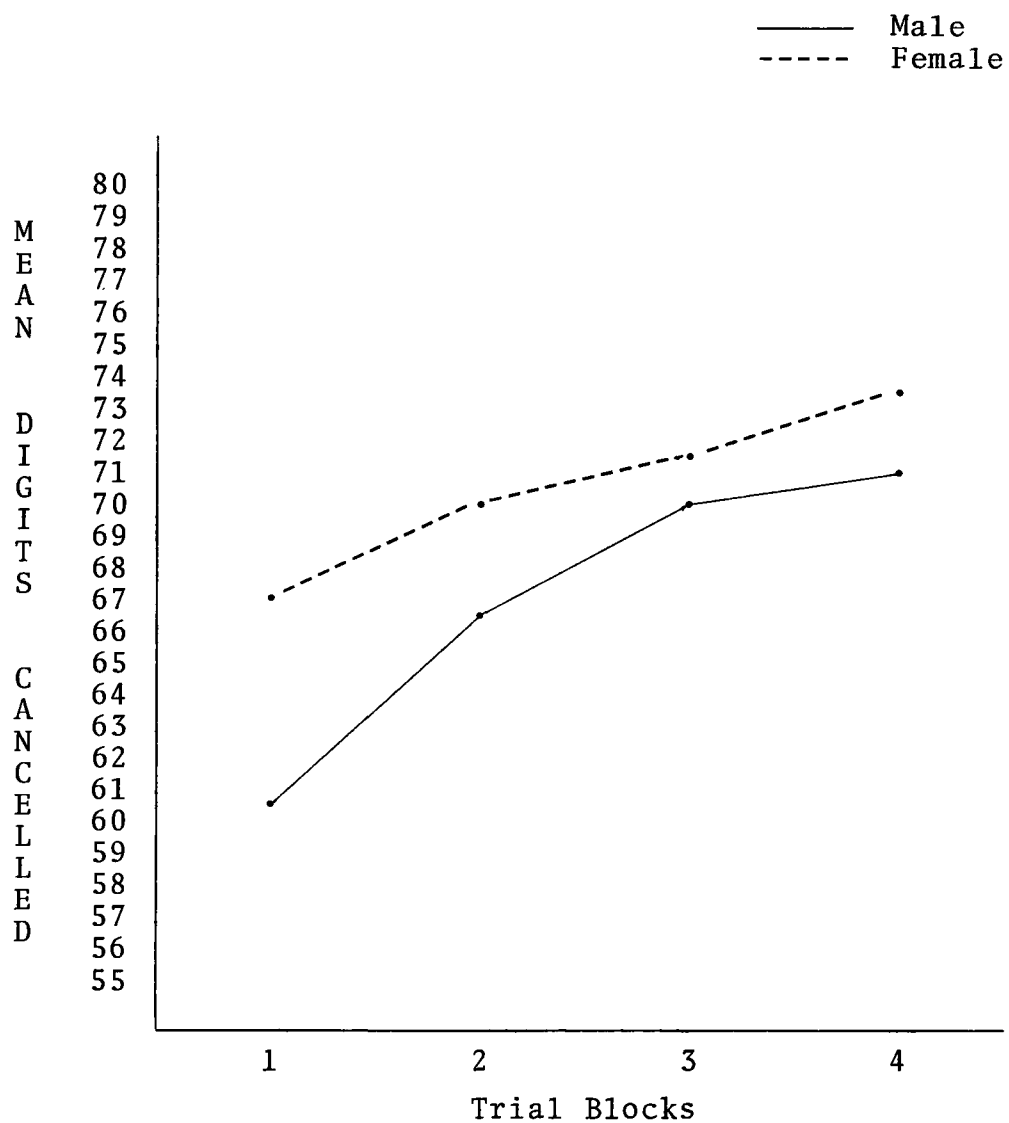


Figure 2 -- Representation of Mean Digits Cancelled for the Four Trial Blocks by Female and Male Subjects.

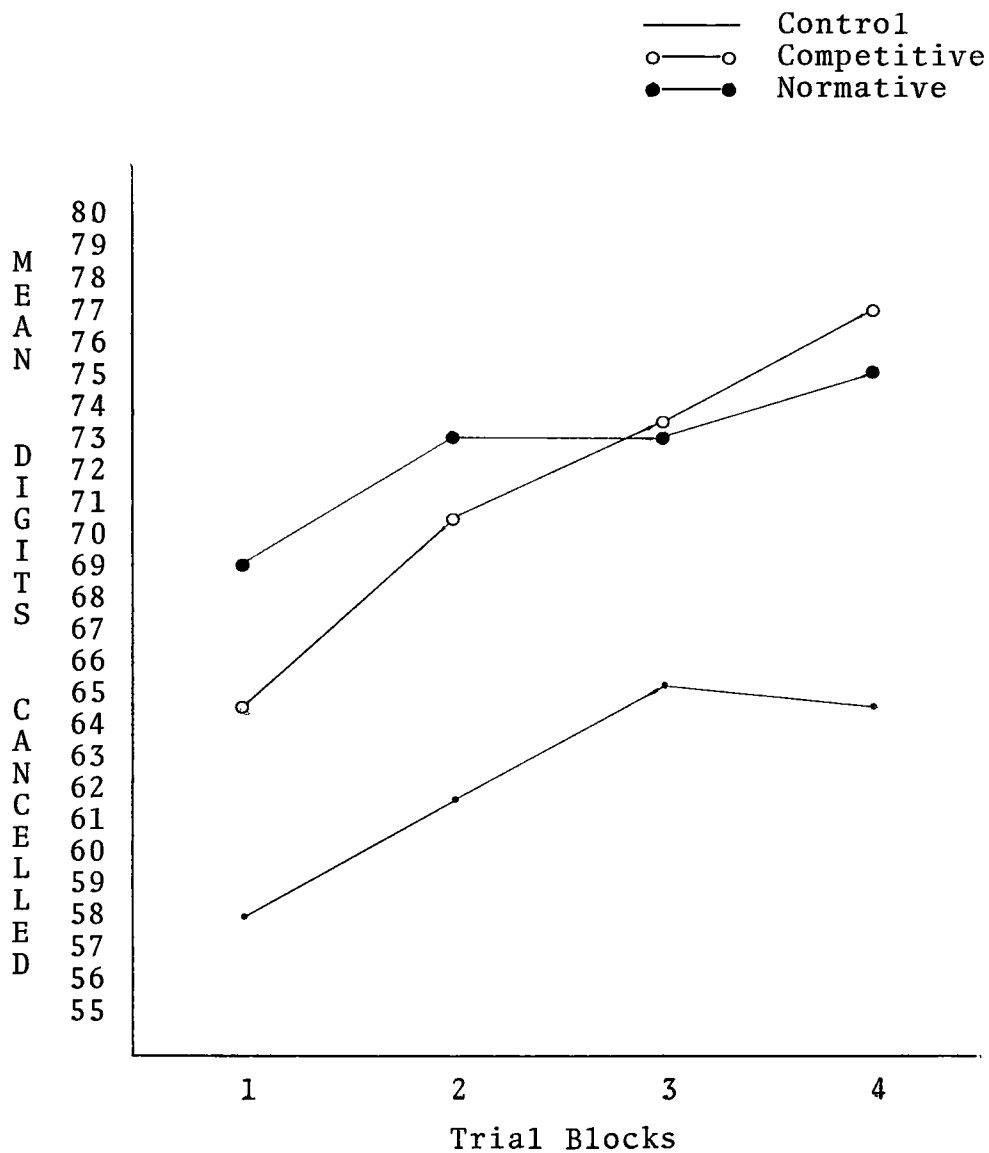


Figure 3 -- Representation of Mean Digits Cancelled for the Four Trial Blocks by Subjects under Control, Competitive and Normative Incentive Conditions.

incentive group ($p < 0.01$), no reliable differences were found between these two groups of subjects. The same test also shows that those subjected to the competitive incentive condition performed better in the fourth trial block than they did in either the second trial block ($p < 0.01$) or the third trial block ($p < 0.05$), whereas those exposed to each of the two other incentive conditions did not show this increase in the number of digits cancelled for either of these two comparisons.

The lack of a significant $I \times S$ ($F(2,108) = 1.0032$; n.s.) interaction did not reject the third null hypothesis. However, all illustrated in Figure 4, the significant $T \times I \times S$ interaction ($F(6,324) = 2.13298$; $p < 0.05$) gives some support to the hypothesis that girls perform significantly better with a normative incentive whereas boys do so with a competitive incentive. Application of the Duncan Multiple Range Test reveals that although on every trial block both boys and girls in each of the competitive and normative incentive conditions performed significantly better than their respective controls (ranging from $p < 0.05$ to $p < 0.01$) with the exception of the third trial block where girls in the control condition performed as well as girls offered a competitive incentive, girls given a normative incentive cancelled a significantly greater number of digits than did those promised a competitive reward in each of the first three trial

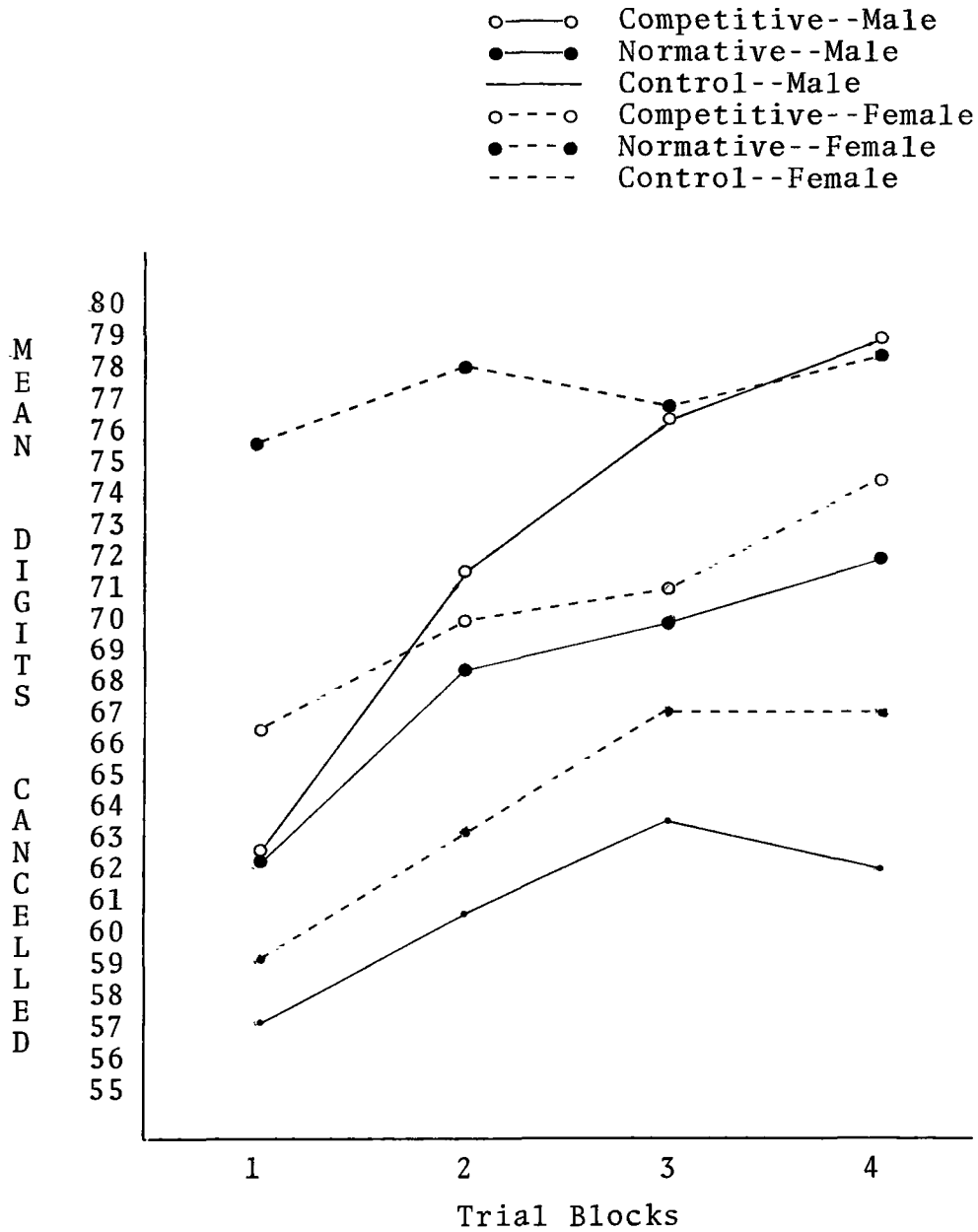


Figure 4 -- Representation of Mean Digits Cancelled for the Four Trial Blocks by Female and Male Subjects Under Control, Competitive and Normative Incentive Conditions.

blocks (ranging from $p < 0.05$ to $p < 0.01$), no difference occurring in the last trial block; on the other hand, boys did not perform significantly differently when offered the two incentives in the first two trial blocks, but in trial blocks three and four they cancelled significantly more digits in the competitive incentive condition than when given a normative incentive ($p < 0.01$). Furthermore, girls performed significantly better than boys when offered a normative incentive in all four trial blocks ($p < 0.01$) whereas the performance of boys surpassed that of girls in the competitive incentive condition in the last two trial blocks ($p < 0.05$), no reliable differences being found in trial blocks one and two; on the other hand, in the control condition no reliable differences were found between the sexes in the first three trial blocks although girls did significantly better than boys in the last trial block ($p < 0.05$).

CHAPTER IV

INTERPRETATION OF FINDINGS

1. Discussion of the Main Effect of Incentive

It was observed that children receiving either a normative incentive or a competitive incentive cancel significantly more digits than those offered no incentive. This result provides some validation for the dependent measure used in this study. It was thought this form of a cancellation test, with the digits tightly packed together, requiring a long period of time in which to work and with no apparent intrinsic value emanating from the task, would require the giving of an incentive to force the subjects to put forth continuous effort. That is, the task was of such a dull, boring, repetitious nature that only the utilization of incentives would cause the subjects to concentrate on the task for long periods of time (i.e., three minutes). Most previous studies concerning the effects of incentives have usually employed tasks that have involved prior learning or knowledge such as school subjects or those that require the use of complex mental processes. As a result, it was often difficult to separate the effects of incentives from those involving past learning and knowledge, intelligence, interest in the task, anxiety over performing poorly in a school subject, etc. Without such confounding factors, the results of

this study show that externally administered incentives are effective with elementary school children.

The fact there is no overall significant difference in performance between those offered the two incentives and no such difference on each of the last three trial blocks can obviously be explained by the differential effects of the incentives on subjects differing in sex and in need for approval and this will be attempted in succeeding sections. The following section is concerned with the interaction between incentive and the personality characteristic, need for approval.

2. Discussion of the Effect of Incentives on the Need for Approval

The results reported in the previous chapter revealed that the second null hypothesis, there is no significant interaction in the number of correct digits cancelled between levels of need for approval and incentive condition, was rejected. Those with a high need for approval performed significantly better with a normative incentive whereas those low in need for approval responded better when promised a competitive reward. The results, then, support the contention that rewards and incentives act in the service of enhancing one's needs and that individuals differing in a given need will respond optimally to different incentives. In this investigation, the children used were at an age level where

they were all concerned with obtaining approval for their efforts and accomplishments. The literature^{1,2,3,4} reveals that from the ages of three and four, children tend to become competitive in their response to peer activities, indicating they gradually internalize a desire to surpass others from the competitive norms of our culture. Leuba⁵ and Greenberg⁶ have shown that kindergarten and preschool children reveal this characteristic by showing greater perseverance and increasing their work output, withholding assistance from others and making favorable comments about their own work. As they grow older and develop the cognitive capacities to appreciate the concept of excelling others and to compare critically their performance with that of others, the contest takes place on a more sophisticated

1 P. Greenberg, "Competition in Children: An Experimental Study," American Journal of Psychology, Vol. 44, 1932, p. 221-248.

2 C. Leuba, "An Experimental Study of Rivalry in Young Children," Journal of Comparative Psychology, Vol. 16, 1933, p. 367-378.

3 A. Gesell and F.L. Ilg, Infant and Child in the Culture of Today, New York, Harper, 1943.

4 J.P. McKee and F.B. Leader, "The Relationships of Socio-Economic Status and Aggression to the Competitive Behavior of Preschool Children," Child Development, Vol. 26, 1955, p. 135-142.

5 Leuba, op. cit., p. 367-378.

6 Greenberg, op. cit., p. 221-248.

level. For example, Ausubel⁷ found elementary school children work less hard under anonymous conditions than when competing with others and the results of Maller's⁸ study revealed individual rewards are more effective than group rewards with such children.

The results of this study show that those differing in the level of need for approval respond to the cultural pressure for achievement and the approval that accompanies it in different ways. All children seek approval for their accomplishments, but those with a low need for approval, possessing adequate amounts of self-esteem, aspire to performance levels above that of the norm, such a performance being connoted by the presentation of a prize. The performance of such children in this study is therefore compatible with such investigations as that of Gruen⁹ and Sears¹⁰ that

7 D.P. Ausubel, "Prestige Motivation of Gifted Children," Genetic Psychology Monographs, Vol. 43, 1951, p. 53-117.

8 J.B. Maller, Cooperation and Competition: an Experimental Study in Motivation, New York, Teachers College, Columbia University, 1929.

9 E.W. Gruen, "Level of Aspiration in Relation to Personality Factors in Adolescence," Child Development, Vol. 16, 1945, p. 181-188.

10 P.S. Sears, "Levels of Aspiration in Academically Successful and Unsuccessful Children," Journal of Abnormal and Social Psychology, Vol. 35, 1940, p. 498-536.

found well-adjusted, academically successful children responded with just such a level of aspiration. They are also predictable from Crandall's¹¹ finding that low need for approval subjects had higher achievement expectations than those strongly approval-motivated. On the other hand, the latter type of subjects in this experiment, commanding a concomitant lack of self-esteem, responded best to an incentive that suggested a normative standard. These results substantiate the prediction that such children tend to avoid disapproval by basing their aspirations on the norm of their peer group. These children have low expectations of success and thus achievement situations such as the one used in this study are extremely stressful to them. To those dependent on approval, it is a strongly evaluative situation in which anxiety is aroused over the possible occurrence of criticism and loss of approval.¹² In other words, the anticipation of failure brings about anxiety. By living up to peer group standards, they can avoid criticism, failure, disapproval, and the accompanying anxiety and thus they work much harder

11 V.C. Crandall, "Personality Characteristics and Social Achievement Behaviors Associated with Children's Social Desirability Response Tendencies," Journal of Personality and Social Psychology, Vol. 4, 1966, p. 481-482.

12 D.P. Crowne, C.H. Holland, and L.K. Conn, "Personality Factors in Discrimination Learning in Children," Journal of Personality and Social Psychology, Vol. 10, 1968, p. 421.

when presented with an incentive compatible with these needs. A normative incentive suggesting comparison with a peer group norm offers them a splended opportunity to satisfy these needs and, at the same time, they need not surrender the high aspirations that approval-dependent children with relatively little self-esteem need to maintain a compensatory, near-perfect image of themselves. Children with a low need for approval, on the other hand, do not find the possibility of failure brought about by a performance below that to which they aspire traumatic and thus can respond with most effort to an incentive that implies a prize will be awarded for performance superior to normative standards.

The fact there were no significant differences in performance between high and low need for approval subjects in the control condition where no incentive was offered has theoretical implications for the development of approval-dependence and the dynamic processes associated with it. Crowne and Marlowe¹³ raise the "intriguing possibility" that the defensive structure that is an important part of the approval motive may not appear until a period later than childhood. The above results give some support to the position that at least part of the defensive structure is not

¹³ D.P. Crowne and D. Marlowe, The Approval Motive, New York, Wiley, 1964, p. 195.

yet developed in the eight- to ten-year age range.

In many of the adult investigations that Crowne and Marlowe¹⁴ reported as validating the need for approval concept, those strongly approval-dependent performed in a culturally acceptable manner and complied with the implied demands of a prestigious, authoritative other, even in the absence of directly exerted pressure. It was concluded such behavior was a reflection of these people's defensive attempts to avert threats to their self-esteem, and to avoid criticism and failure since they have little confidence in their own abilities to achieve success in socially evaluative situations. That is, this type of behavior is one of the means of bolstering one's self-image by covering up personal flaws before they and others become aware of them. Thus, it might have been expected that these subjects would have suppressed their real attitudes towards the task and expended great amounts of effort just to please the experimenter.

That high need for approval subjects in this experiment did not behave in this manner to a significantly greater degree than those less motivated for approval suggests the repressant, avoidant mechanism used by approval-dependent adult subjects is not yet developed at this age level. The results indicate children are indeed aware of

14 Ibid.

their own personal shortcomings and cannot conceal them by acting in a manner unrelated to the intrinsic requirements of the task just because that would gain them approval from adults. It would appear that only by stating clearly a normative peer group standard will these children be motivated to perform maximally on a long, boring task. Therefore, it is concluded that children characterized by a strong need for approval rely on perceived cultural norms as behavioral models to maintain an acceptable image of themselves.

Part of the explanation for the lack of a significant difference in performance between the two groups of subjects when only the implied demands of a significant adult are being exerted may be due to the fact, that although children at this age level may wish to appear socially acceptable, the source of this acceptance is their peer group and not so much the authoritative adult from whom children desire to achieve independence and even to rebel against their strictures as they approach adolescence. Indeed, Crandall, Crandall and Katkovsky¹⁵ advanced this argument for the fact the mean score on the CSD scale decreased with age. Thus, it appears that during this period of development, the

15 V.C. Crandall, J. Crandall and W. Katkovsky, "A Children's Social Desirability Questionnaire," Journal of Consulting Psychology, Vol. 29, 1965, p. 31-32.

favorite source of group acceptance is the peer group and that children need this approval to sustain their positive self-evaluation. Consequently, only those incentives that compare one's performance to that of his peers appear to differentiate between the two groups of subjects. Further research in which a clearly stated adult expectation is utilized is needed to test this conclusion.

An opposing expectation when comparing performance of the two groups of subjects under the condition where no external incentive is offered might have been: low need for approval subjects would do significantly better than those strongly approval-dependent. This expectation would have been generated from those findings that reveal the former type of subject is more interested than the latter in the intrinsic nature of the task and he does not need an externally administered incentive to enhance his performance as much as does an approval-dependent subject. That the results of this study are not consistent with this expectation is again a source of validation for the dependent measure used in this experiment. It indicates the task was of such a boring, uninteresting nature, having a sufficiently long duration and requiring enormous amounts of energy expenditure, that only extrinsic incentives would differentiate between children varying in the personality characteristic of need for approval.

3. Discussion of the Effects of Incentives on Sex

As was noted in the previous section, the findings do not warrant the rejection of the third null hypothesis; that is, overall test performance was not best for girls under the condition of a normative incentive and boys did not perform significantly better when offered a competitive incentive than when exposed to the normative incentive. However, on certain trial blocks these specific predictions were borne out by the data, results that are elucidated by the findings of the significant T×S interaction. Thus, it becomes necessary to discuss the meaning of the differential performance of boys and girls on the various trial blocks.

The findings reveal girls performed better than boys for the first two trial blocks after which there was no significant difference between the two sexes. More salient to the present discussion is the fact the performance of girls improved only to the end of the second trial block whereas that of boys showed continual improvement until trial block three was completed. Thus, it appears girls reach their asymptote much quicker than boys. That is, they tend to reach a level that is commensurate with their ability earlier than do their male counterparts.

On the basis of evidence presented above that female children display more approval-motivated behavior than male children in socially evaluative situations, it is not

surprising to find girls comply more quickly to what is expected of them. Since the total testing situation qualifies as a social one, girls are more sensitive to the implied demands of the situation and thus are more likely to inhibit the expression of their real attitudes toward the task and to expend great effort immediately on an intrinsically unpleasant task. Furthermore, since much previous research has shown girls in this age range are more responsive to an adult male experimenter than are boys, this factor was probably somewhat responsible for the initially better performance of female children. Finally, it has been well established girls perform significantly better than boys on tests of clerical aptitude and thus on the basis of ability it is to be expected they would reach their asymptote much sooner than boys.

In the light of these findings concerning the differential performance of boys and girls over trials, some support is found for the experimental hypothesis that girls perform better with a normative incentive and boys with a competitive one. That is, the results indicate this statement is true for those trial blocks after the children have reached their asymptote. Thus, girls perform significantly better with a normative incentive than a competitive one for the first three trial blocks whereas the reverse is true for boys only in trial blocks three and four. Furthermore, the

T×S interaction also explains why girls performed significantly better than boys under the condition of a normative incentive.

These specific predictions were based on the assumption girls tend to seek approval and esteem by acting in ways consistent with the majority of their peers whereas boys strive for this goal by competing for pre-eminence. This differential manner in which the sexes achieve this end is a product of the differing parental attitudes and practices pertaining to boys and girls. As the child's cognitive sophistication increases during the early years of life, he realizes not only that he is helpless and dependent on others to satisfy his own needs, that he is a relatively insignificant and powerless figure in the household, but that his parents satisfy these needs only out of a sense of love and good will and not because of his power to make his parents subservient to his will. Thus, the perceived discrepancy between the power of adults and his own lack of mastery of the environment leads the child to identify with the parents so as to share vicariously in this power. By this means the child incorporates into himself, the parents' strengths and adequacies; he sees himself as more adequate and self-controlled and thus his feelings of dependence and

subordination are minimized and diminished.¹⁶

This process applies to girls to a much greater extent than to boys. For one thing, girls perceive themselves to be more accepted as persons in their own right than boys do; they perceive their acceptance as more independent of their own competence or performance ability.¹⁷ The parents are more likely to withhold a greater degree of acceptance until one has acquired the skills necessary to gratify his needs in the case of boys than is true of girls. As a result, boys have a greater tendency to seek feelings of self-esteem, worth, and importance by striving for accomplishment and hierarchial position; on the other hand, the feelings of girls are relatively immune to such factors and they are thus more likely to conform to adult expectations since their status is more dependent on identification with the latter. Having learned to accept their subordinate position in the family and finding that being a member of a group provides feelings of security and adequacy to them, girls have a greater tendency to generalize these feelings and habits of compliance, conformity, and norm-oriented

16 D.P. Ausubel, Theory and Problems of Child Development, New York, Grune & Stratton, 1958, p. 288-289.

17 -----, "Perceived Parental Attitudes as Determinants of Children's Ego Structure," Child Development, Vol. 25, 1954, p. 173-183.

behavior to social settings outside the home. They experience a greater spontaneous joy and enthusiasm in group activities and thus are more responsive to normative standards.

These conclusions are supported by the results of investigations by Zeligs¹⁸ and Cobb¹⁹ who found the wishes of girls exceed those of boys in the areas of social and family relationships, physical appearance and personal characteristics whereas the emotional responsiveness and wishes of boys relative to those of girls tend more in the direction of self-aggrandizement, personal achievement, and possessions. Similarly, Walter and Marzolf²⁰ found girls set lower levels of aspiration for laboratory tasks than did boys. Findings such as these are consistent with those that show girls' achievement motivation scores increases significantly when 'popularity' and 'social acceptance' are stressed whereas those of boys increase in situations that stress

18 R. Zeligs, "Children's Wishes," Journal of Applied Psychology, Vol. 26, 1942, p. 231-240.

19 H.V. Cobb, "Role-wishes and General Wishes of Children and Adolescents," Child Development, Vol. 25, 1954, p. 161-171.

20 L.M. Walter and S.S. Marzolf, "The Relation of Sex, Age, and School Achievement to Levels of Aspiration," Journal of Educational Psychology, Vol. 42, 1951, p. 285-292.

successful competition.^{21,22,23} Furthermore, the greater competitiveness of boys was revealed in the doctoral dissertation of the supervisor of this research²⁴ who found boys displayed a greater number of competitive responses than girls in a gaming situation.

The findings summarized in this section are predictable on the basis of the analysis, girls are subjected to less cultural pressure than boys to maintain their self-esteem and prove their adequacy by their accomplishments. Furthermore, they are not expected to achieve status for themselves and their family through vocational success as are boys and will in fact depend upon their future husbands for this status. Thus, it is not surprising girls' performances are most responsive to incentives suggesting a peer

21 J.A. Veroff, "A Projective Measure of Achievement Motivation in Adolescent Males and Females," unpublished honors thesis, Wesleyan University, 1950, quoted by R. Brown, Social Psychology, New York, The Free Press, 1965, p. 439.

22 S. Wilcox, "A Projective Measure of the Achievement Motivation of College Women," unpublished honors thesis, University of Michigan, 1951, quoted by R. Brown, op. cit.

23 W.F. Field, "The Effects of Thematic Apperception upon Certain Experimentally Aroused Needs," unpublished doctoral dissertation, University of Maryland, 1951, quoted by R. Brown, op. cit.

24 H. Coady, Behavioral Correlates of Moral Judgment, unpublished doctoral dissertation, University of Ottawa, 1970.

group norm whereas those of boys are best when exposed to one implying competence superior to the norm. All the familial and cultural forces impinging on boys stress instrumental adequacy whereas those affecting girls stress instrumental dependence and conventional, norm-oriented behaviors.

4. An Alternative Interpretation of the Data

The results of this experiment can also be conceptualized in terms of the theory of achievement motivation elaborated by Atkinson and Feather.^{25,26} This theory is directed towards those situations in which an individual's performance at a task may be evaluated against standards of excellence associated with success and failure and considers motivation to be a function of the motive within the person, the expectancy of satisfying the motive through some action, and the specific incentive in the situation. According to this theory, there are two motives operating in achievement-oriented situations. "The motive to achieve success (Ms) is conceived as a disposition to derive satisfaction from successful exercise of skill; the motive to avoid failure (Maf)

25 J.W. Atkinson, "Motivational Determinants of Risk-Taking Behavior," Psychological Review, Vol. 64, 1957, p. 359-372.

26 J.W. Atkinson and N.T. Feather (eds.), A Theory of Achievement Motivation, New York, Wiley, 1966.

is conceived as an independent disposition to experience shame and embarrassment as a result of failure."²⁷

The theory suggests that an individual will display a positive interest in achievement-related tasks when the motive to achieve success is stronger than the motive to avoid failure (i.e., Ms > Maf) whereas an individual in whom Maf > Ms tends to avoid achievement-related tasks unless he is constrained to perform them as was the case in this study.

The fact that children receiving either a normative incentive or a competitive incentive cancelled significantly more digits than those offered no incentive suggests that the experimental test situation used in the control condition of this study did not provide the situational cues necessary to indicate that the subject's performance was to be instrumental to achievement. The motive-dispositions to achieve success and to avoid failure are presumed to be latent and not activated until the situation arouses expectancies in the person that his performance will be evaluated against standards of excellence associated with success and failure. The data rejecting the first null hypothesis indicate that only when the incentives, referring to standards of excellence, were administered was there a substantial change in performance.

²⁷ N.T. Feather, "The Study of Persistence," Psychological Bulletin, Vol. 59, 1962, p. 106.

The finding of a significant I×A interaction, rejecting the second null hypothesis, can also be interpreted in terms of the theory of achievement motivation. Indeed, the categorization of the children into high and low need for approval subjects can be regarded as indirect or somewhat analagous measures of the motives to avoid failure and achieve success respectively. In studies involving achievement motivation, the strength of these two motives are typically reflected by low and high scores on a fantasy-production measure of achievement motivation (TAT n Ach). That high and low need for approval subjects in the present study can be compared to those high and low in n Ach arises from the findings that those high in the need for approval perform less well on standardized achievement tests, show less achievement fantasy, participate less often in achievement-oriented activities and have lower expectations of success under these conditions.^{28,29}

Since studies using achievement tasks and holding the value of an incentive constant show that the child who holds a strong expectancy that his effort is capable of producing successful results will spend more time and effort on

28 Crandall, op. cit., p. 477-486.

29 V.C. Crandall, V.J. Crandall and W. Katkovsky, "A Children's Social Desirability Questionnaire," Journal of Consulting Psychology, Vol. 29, 1965, p. 27 36.

an achievement task than will the child who does not expect to be able to attain the rewards,^{30,31,32,33} it is not surprising to find that those with a high need for approval (i.e. Maf) perform best with a normative incentive. If we assume that the normative incentive influences the subjects to begin the task with a high initial expectation of success, believing it to be easy and well within their competence and that the competitive incentive influences them to begin the task with a much lower expectation of success, believing it to be much more difficult, then they will be more likely to approach the task under the easier condition. On the other hand, the easy condition is not likely to elicit much achievement motivation in those with a low need for approval (i.e. Ms) since the standards of excellence referred to are not great enough and these subjects may be relatively

30 V.J. Crandall, W. Katkovsky and A. Preston, "Motivational and Ability Determinants of Young Children's Intellectual Achievement Behaviors," Child Development, Vol. 33, 1962, p. 643-661.

31 E. Battle, "Motivational Determinants of Academic Task Persistence," Journal of Personality and Social Psychology, Vol. 2, 1965, p. 209-218.

32 N.T. Feather, "Effects of Prior Success and Failure on Expectations of Success and Subsequent Performance," Journal of Personality and Social Psychology, Vol. 3, 1966, p. 287-298.

33 B.B. Tyler, "Expectancy for Eventual Success as a Factor in Problem Solving Behavior," Journal of Educational Psychology, Vol. 49, 1958, p. 166-172.

uninterested in this type of situation and may not feel it worthwhile to try very hard. In addition, these subjects enter achievement-oriented situations with greater expectations of success and are thus more likely to approach the task in the competitive condition than those with a high need for approval.

This interpretation is compatible with the results of a study by Feather³⁴ who found a significant positive correlation in a moderately difficult condition (using similar but more explicit language compared to that used in the present study's competitive incentive condition) between performance scores (number of anagrams correctly solved) and n Ach scores, but no significant relationship between their scores in an easy condition which was similar to the condition of the normative incentive. Furthermore, subjects low in n Ach were found to perform better at a task when the chances of winning were high (34) than those high in n Ach in studies reported by Atkinson³⁵ and McClelland,³⁶ and

34 N.T. Feather, "The Relationship of Expectation of Success to Need Achievement and Test Anxiety," Journal of Personality and Social Psychology, Vol. 1, 1965, p. 118-126.

35 J.W. Atkinson (ed.), Motives in Fantasy, Action and Society, Princeton, Van Nostrand, 1958, p. 288-305.

36 D.C. McClelland, The Achieving Society, Princeton, Van Nostrand, 1961, p. 217-221.

and Atkinson³⁷ earlier found that subjects low in n Ach tended to have higher performance scores than those high in n Ach under relaxed conditions. The literature on the relation between strength of assessed achievement motive and level of performance shows that persons in whom the motive to achieve success (Ms) is strong relative to the motive to avoid failure (Maf) will perform an achievement-related task more rapidly and efficiently when the achievement-test character of a task is effectively stressed than persons in whom Maf is strong in relation to Ms.^{38,39,40}

There are other studies that show that when there are no achievement-related alternative activities to turn to, as was the situation in this study, persons in whom the motive to achieve success (Ms) is strong in relation to the motive to avoid failure (Maf) are more persistent than

37 J.W. Atkinson, "The Achievement Motive and Recall of Interrupted and Completed Tasks," in D.C. McClelland (ed.), Studies in Motivation, New York, Appleton-Century-Crofts, 1955, p. 495-506.

38 J.W. Atkinson and W.R. Reitman, "Performance as a Function of Motive Strength and Expectancy of Goal Attainment," Journal of Abnormal and Social Psychology, Vol. 53, 1956, p. 361-366.

39 J.W. Atkinson and A.C. Raphelson, "Individual Differences in Motivation and Behavior in Particular Situations," Journal of Personality, Vol. 24, 1956, p. 349-363.

40 C.P. Smith, "The Influence of Testing Conditions on Need for Achievement Scores and Their Relationship to Performance Scores," in J.W. Atkinson and N.T. Feather (eds.), op. cit., p. 277-297.

persons in whom Maf is strong in relation to Ms. For example, Atkinson and Litwin⁴¹ showed that n achievement (Ms) was positively related to the length of time students spent at a final exam and that test anxiety (Maf) was negatively related to this variable. Similarly, French and Thomas⁴² found that subjects classified as high in n achievement spent a longer amount of time than a group of subjects low in this motive. Furthermore, Thomas⁴³ found the stronger the achievement motive, the longer a subject would spend at a problem without objective knowledge of progress, a situation which is somewhat parallel to that of the present study.

It is also possible that the desire for social approval was operating in all incentive conditions for those with a high need for approval (i.e. Maf), but not for those with a low need for approval (i.e. Ms) because of the presence of the experimenter. Total motivation to perform an

41 J.W. Atkinson and G.H. Litwin, "Achievement Motive and Test Anxiety as Motives to Approach Success and to Avoid Failure," Journal of Abnormal and Social Psychology, Vol. 60, 1960, p. 52-63.

42 E.G. French and F.H. Thomas, "The Relation of Achievement Motivation to Problem Solving Effectiveness," Journal of Abnormal and Social Psychology, Vol. 56, 1958, p. 46-48.

43 F.H. Thomas, "Visualization, Experience, and Motivation as Related to Feedback in Problem Solving," American Psychologist, Vol. 11, 1956, p. 444.

achievement task is attributed to the motivation to achieve success at the task, motivation to avoid failure at the task, and extrinsic motivation to perform the task. Thus, one would have been led to predict that in the control and normative incentive conditions, high need for approval subjects would have performed better than their low need for approval counterparts. Previous studies^{44,45,46} have shown both that those high in TAT n Affiliation display all the characteristics of a highly achievement-motivated individual on tasks which required interaction with the experimenter who could observe what and how well he was doing and that the relation between n Ach and achievement performance predicted by the theory of achievement motivation occurs only in the absence of the experimenter.

That high need for approval subjects did not thus perform better in the control condition may possibly be attributable to their greater anxiety to perform well and the fact that anxiety has been shown to lead to performance decrements on tasks which call for rapid discrimination

44 J.W. Atkinson and P. O'Connor, "Neglected Factors in Studies of Achievement-Oriented Performance: Social Approval as Incentive and Performance Decrement," in J.W. Atkinson and N.T. Feather (eds.), op. cit., p. 299-325.

45 Atkinson and Reitman, op. cit., p. 361-366.

46 Smith, op. cit., p. 277-297.

under time pressure.⁴⁷ Since the digits were so tightly packed together, the task used in this study may be classified as a discrimination one.

Furthermore, one study⁴⁸ found a discriminative learning deficit on the part of high need for approval subjects and the authors interpreted this deficit as a result of anxiety effects on attention. Specifically, their results revealed that approval-motivated elementary school children took significantly longer to learn an initial discrimination problem and an extradimensional nonreversal shift where attention to a different stimulus dimension was required than did subjects low in the approval motive. There was no difference between the two approval-motivated groups in the number of trials to criterion to learn an intradimensional shift where the same stimulus dimension was relevant. The authors argued that their learning and achievement situation was so stressful for highly approval-motivated children that greater autonomic arousal occurred and this anxiety indicator interfered with their attending to the relevant stimulus dimension. Furthermore, the heart rate of children high in the approval motive was significantly

47 R.M. Yerkes and J.O. Dodson, "The Relation of Strength of Stimulus to Rapidity of Habit-Formation," Journal of Comparative and Neurological Psychology, Vol. 18, 1908, p. 459-482.

48 Crowne, Holland and Conn, op. cit., p. 420-430.

higher than those not so strongly motivated, although heart rate was not related to learning.

This experiment indicates that anxiety occurring in stressful situations adversely affects the learning of approval-motivated children and explains why they perform less well in the competitive condition and no better than low need for approval children in the control condition. The results imply that the former children become more anxious when administered a competitive incentive and thus are more likely to avoid the task. On the other hand, the results imply that the effect of the words spoken in the normative condition is to reassure the subject that the task is easy, thus allaying his anxiety, making it more likely that he will approach the task and that his discriminative performance will not be diminished by a too intense level of motivation. Since the strength of the motive to avoid failure is often measured by questionnaires of test anxiety as a substitute for and in conjunction with a low n Ach score and since persons strong in test anxiety have been shown to suffer performance decrements under conditions of strong competition with others,^{49,50} this implication seems highly

49 R. Alpert and R.N. Haber, "Anxiety in Academic Achievement Situations," Journal of Abnormal and Social Psychology, Vol. 61, 1960, p. 207-215.

50 Atkinson and Litwin, op. cit., p. 52-63.

plausible.

Another explanation of the significant interaction between high and low need for approval individuals and the normative and competitive incentive conditions stems from Atkinson's⁵¹ original formulation of the theory of achievement motivation. Atkinson⁵² reports two experiments which reveal that in novel situations where subjects are constrained to perform as was the situation in this study, those in whom the motive to achieve success was greater than the motive to avoid failure perform best when the stated objective odds were long (i.e. .33) and Atkinson theorized that in such novel situations, individuals in whom the motive to avoid failure is stronger than the motive to achieve success should reach the point of maximum motivation and hence perform better when the stated, objective probability of success is somewhat above .50. The results of this study would be consistent with Atkinson's conclusions if it is assumed that the competitive incentive condition corresponds to that where the objective odds of success are below .50 and that the normative incentive corresponds to that where the odds of success are stated as above .50. For this purpose, it is proposed that this experiment be

51 Atkinson, op. cit., 1957, p. 367.

52 Ibid., p. 365-367.

repeated stating actual odds of success which is usually done in studies testing implications of the theory of achievement motivation. Since probability of success is usually stated in terms of seventy and thirty percent of a normative group passing a given item, it is proposed that these figures be used.

In view of interpreting the data in terms of the theory of achievement motivation, several reformulations of the design could be suggested.

First, to ascertain the effects of the immediate need for social approval, the social demand for achievement on girls and children high in the need for approval, another incentive condition (normative-social) should be utilized. In this condition, the examiner could say "After you are finished, I will tell your teacher and the other children in your class how well you've done." This statement would constitute a positive achievement demand from the social world and would enable one to determine if these children are concerned with how well they do or if they perform in order to be liked by significant others. It is the writer's prediction that girls and children high in the need for approval would perform best under this condition since gaining the approval of others is more central to their personality structure than is any actual level of achievement.

In addition, to make clearer the notion that a prize

will definitely be given for superior performance and sufficient effort, another incentive condition (competitive-contingent) in which the examiner could add that "If you work real hard and do very well, you will be given a prize," should be used. It is predicted that boys and children low in the need for approval will perform best under this condition since the evidence suggests they perform best in situations that stress successful competition and reward for superior performance.

Second, since it is interesting to discover how individuals of various ages respond to incentives referring to different standards of excellence and to social approval from significant persons in his environment, it is proposed that an additional group of fourteen- to sixteen-year-old boys and girls be added to the present experimental design. It could be predicted that no differences will be found between the need for approval groups and between the sexes for any of the incentive conditions. The evidence on age differences presented above indicated that, as children grow older, they develop an internalized need to be correct and an increasing tendency to be more affected by the intrinsic value of the assignment and the effort it entails. Thus, they are not likely to be concerned with obtaining externally-administered material and social rewards. Furthermore, recent cultural trends would augment these age tendencies in

leading one to predict no differences between boys and girls on any of the incentive conditions.

SUMMARY AND CONCLUSIONS

The review of the literature indicates most studies using incentives have neglected the importance of the personality of the child as a determinant of their effectiveness. Accordingly, the personality disposition need for approval, as formulated by Crowne and Marlowe and Crandall, was chosen as such a variable and its behavioral correlates were described. After a discussion of the developmental and child-rearing factors associated with approval-motivated behavior, an attempt was made to investigate the relation between need for approval and goal-seeking behavior. The sample, administration of the social desirability questionnaire and the number-cancellation task, statistical design, analysis of behavior and hypotheses were described in the next chapter.

Since the present study was concerned mainly with differential incentive effectiveness, the responses of male and female children high and low in the need for approval under three incentive conditions were compared. A third aim was to ascertain whether externally administered incentives are more effective than a condition employing no clearly specified incentive.

The first null hypothesis stating no significant difference between the incentive conditions was rejected; that is, those subjects exposed to the normative incentive and

those to the competitive condition cancelled significantly more correct digits than subjects in the control group. Furthermore, there was no overall significant difference in performance between those offered the two externally administered incentives.

The second null hypothesis indicating no significant difference between high and low need for approval subjects under the different incentive conditions was rejected. The $I \times A$ interaction revealed differential incentive effectiveness in that HNA subjects cancelled more digits when administered the normative incentive than in the other two incentive conditions whereas LNA subjects cancelled more digits in the competitive condition. Furthermore, the normative incentive was more effective for HNA than for LNA subjects whereas the reverse was true for the competitive incentive.

The third and final null hypothesis, there are no significant differences in the number of digits cancelled between male and female subjects under the different incentive conditions, was not rejected. The $I \times S$ interaction revealed no overall differences between the two sexes. However, the significant $T \times S$ and $T \times I \times S$ interactions gave some support to the prediction boys perform best with a competitive incentive and girls with a normative incentive; the $T \times S$ interaction indicated girls reach their asymptote quicker than boys and the $T \times I \times S$ interaction revealed that only after this

level is reached does the hypothesized relationship between sex and incentive occur.

The results of this study suggest the importance of investigating other personality traits or dispositions and variables such as sex, age, education level, class, status, etc. as sources of individual differences in responding to different incentives. Similarly, since the investigation revealed children can discern the meaning implied by various verbal incentives, one way to avoid the problems of multiple determinants when employing verbal incentives would be to specify the meaning of the incentives. Consequently, the value of the different verbal incentives to which children are continually exposed could be ascertained through experimental investigations.

An interesting area for future research stems from the finding of a lack of a significantly better performance by the HNA group under the control condition, suggesting that adults are not the only or major source of social acceptance for eight- to ten-year-old children. Consequently, multiple opportunities are available to test the relative social influence of adult and peer group on individuals of various ages using as dependent variables the behavior mediated by the need for approval concept; i.e., compliance, conformity, attitude change, goal-setting, etc.

Finally, further research on need for approval and academic tasks may help the teacher and other school

personnel to understand more fully the social determinants of academic motivation and achievement. For example, studies using smaller groups of subjects could be undertaken to discover if the low task persistence in achievement activities of approval-motivated individuals may be overcome by the introduction of a process of behavior modification whereby the child is presented with tasks that successively approximate a more age-and-grade-appropriate level of competence and told achievement in them represents the norm. Similar research may also be initiated to determine if under-achieving pupils characterized by a low need for approval may prosper under a pedagogical regime of stars, honor rolls, and other indices of accomplishment superior to the norm.

BIBLIOGRAPHY

Crandall, Virginia C., Personality Characteristics and Social and Achievement Behaviors Associated with Children's Social Desirability Response Tendencies," Journal of Personality and Social Psychology, Vol. 4, 1966, p. 477-486.

This is a comprehensive series of investigations involving many aspects of behavior in a wide variety of situations and on a multidimensional personality inventory. The results suggest that the high SD child presents a behavioral and personality picture similar to that of his adult counterpart. They indicate such a child avoids situations where others might evaluate his efforts negatively since he lacks confidence in his own social skills and achievement abilities as a means of attaining a positive evaluation and, instead, seeks peer and adult acceptance by modeling his behavior to their standards.

-----, Maternal Antecedents of Children's Social Desirability Response Tendencies (mimeographed), unpublished NIH Progress Report, Current Project 9, Jan. 1966-Dec. 1968, p. 75-87.

This is the one investigation dealing directly with the relationship between maternal child-rearing practices and scores on the CSD scale. The findings revealed a fairly definite pattern of relationships for boys, but only one significant correlation for girls. The results are consistent with other evidence involving the relationship between child-rearing practices and behaviors mediated by the need for approval concept and also help explain sex differences in such behavior and in social desirability responding.

Crandall, Virginia C., Vaughn J. Crandall, and Walter Katkovsky, "A Children's Social Desirability Questionnaire," Journal of Consulting Psychology, Vol. 29, 1965, p. 27-36.

This paper described the construction and characteristics of the CSD scale. An initial attempt to discover the personality and behavioral correlates of social desirability responding in children was made by investigating such demographic variables as age, sex, I.Q., socioeconomic background, ethnic origin, etc. The tentative conclusion was their 'compensatory' hypothesis: when a child feels at a personal disadvantage, one way he obtains satisfaction is to gain approval by appearing conventional, polite and good.

Crowne, Douglas P. and David Marlowe, The Approval Motive, Studies in Evaluative Dependence, New York, Wiley, 1964, xii-233 p.

The authors reported an extensive attempt to link test-taking behavior with the personality characteristics of the respondent, and developed the concept of need for approval in adults. They also provided substantial experimental evidence from twelve studies as proof of the construct validity of their Marlowe-Crowne Social-Desirability Scale as a measure of need for approval. The questionnaire used in this study was directly derived from the Crowne and Marlowe test.

Douvan, Elizabeth, "Social Status and Success Striving," Journal of Abnormal and Social Psychology, Vol. 52, 1956, p. 219-223.

The relevance of this article is twofold: failure to perform as well as their peers is motivating for middle-class children and this motivation is reflected in the area of achievement striving; the motivating quality of the failure to achieve an abstract norm was predicted on the basis of early and consistent demands by middle-class parents and society for personal accomplishment.

Erickson, Marilyn T., "Effects of Social Deprivation and Satiation on Verbal Conditioning in Children," Journal of Comparative and Physiological Psychology, Vol. 55, 1962, p. 953-957.

This study investigated the relative efficacy of a social and a material reward in children receiving prior deprivation and satiation of verbal approval and adult attention. More effective verbal conditioning was found in the 'deprived' children following the social reward, but the groups did not differ when the reinforcement consisted of marbles. The experiment demonstrated that experimental manipulation can modify incentive value and that children are more responsive to an incentive most appropriate to their need.

Getzels, J.W. and J.J. Walsh, "The Method of Paired Direct and Projective Questionnaires in the Study of Attitude Structure and Socialization," Psychological Monographs, Vol. 72, No. 1, 1958, 30 p.

The results of this investigation revealed that the impulses, behavior, and personal attitudes of children between the ages of eight and thirteen show an increasing tendency to conform to the norms and expectations of peer group and adult society, and that this process applies more

to girls than to boys, more to children born first in a family than to those born later. This study provides justification for the use of an incentive suggesting comparison with a peer group norm, helps explain why individuals with certain positions on demographic variables should respond best to such an incentive, and provides some substantiation for the relationship between child-rearing practice and the behaviors predicted by the need for approval concept.

Heathers, Glen, "Emotional Dependence and Independence in Nursery School Play," Journal of Genetic Psychology, Vol. 87, 1955, p. 37-57.

This study demonstrated the increasing importance of the peer group as an object of emotional dependence and the greater seeking of attention or approval for one's accomplishments with increasing childhood age. Its relevance also lies in the fact that the greater the manifestation of these tendencies, the more likely the child is to engage in play behaviors associated with low scores on the CSD scale that, in turn, decrease with age.

Rosenhan, David and Jean A. Greenwald, "The Effects of Age, Sex and Socioeconomic Class on Responsiveness to Two Classes of Verbal Reinforcement," Journal of Personality, Vol. 33, 1965, p. 108-121.

The results of this investigation revealed older elementary school children to be more responsive than younger ones to reinforcers signifying a correct performance, but no differences to those indicating praise, implying an internalization of the need to be correct with increasing childhood age. The additional finding that the younger children are more influenced by praise reinforcers verifies the conclusion gleaned from similar studies that children discern the subtle differences connoted by verbal reinforcers.

Terrell, Glen, "The Role of Incentive in Discrimination Learning in Children," Child Development, Vol. 29, 1958, p. 231-236.

The most relevant finding of this investigation is that when its middle-class subjects were questioned after the experiment, most indicated that the best way to get them to do something was by asking rather than promising them something or giving them a piece of candy. This finding supports the position that middle-class children are motivated to perform efficiently and implies that incentives linked to the achievement standards of the peer group are motivating for these children.

Tutko, Thomas Arthur, Need for Social Approval and Its Effect on Responses to Projective Tests, unpublished doctoral dissertation, Northwestern University, 1962, vi-109 p.

In this study of the responses to three projective tests, the data reflected strong evidence that those with high social desirability scores tend to avoid failure by becoming very defensive, giving more common, popular and fewer pathological responses. The importance of low self-esteem as a personality correlate of the tendency of approval-motivated individuals to be influenced by cultural norms was also demonstrated by the fact that when the personality evaluative consequences of their behavior are not stressed, their responses indicated less need to avoid possible disapproval for revealing personal weaknesses.

Witryol, Sam L., Donald J. Tyrrell, and Lynn M. Lowden, "Development of Incentive Values in Childhood," Genetic Psychology Monographs, Vol. 72, 1965, p. 201-246.

This publication defined incentive as a construct representing expectancy of reward and included a discussion on the evaluation and influence of incentives on child behavior. The authors reviewed related research and discussed previous findings. The view was advanced that an incentive, to heighten drive and thus enhance performance, must be relevant to the developmental level and motivation history of the child. The results of the specific experiment reported in this article substantiated this conclusion.

Zigler, Edward and Paul Kanzer, "The Effectiveness of Two Classes of Verbal Reinforcers on the Performance of Middle- and Lower-Class Children," Journal of Personality, Vol. 30, 1962, p. 157-163.

This publication supported the authors' contentions that verbal incentives can be subdivided on the basis of the connotation they imply, that children can discern the meaning of these incentives, and that subjects differing in a particular demographic characteristic can respond differentially to these incentives.

APPENDIX 1

QUESTIONNAIRE UTILIZED TO MEASURE
NEED FOR APPROVAL

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NEED FOR APPROVAL

CSD Scale: Question Form

Name _____

Sex _____ Age _____

Date _____

- Y N 1. Do you ever get angry if you have to stop in the middle of something you're doing to eat dinner or to go to school?
- Y N 2. Does it sometimes bother you to share your things with your friends?
- Y N 3. Do you always enjoy yourself at a party?
- Y N 4. Are you always polite to older people?
- Y N 5. Do you sometimes tell a little lie?
- Y N 6. Do you ever hit a boy or girl who is smaller than you?
- Y N 7. Sometimes do you feel like doing other things instead of what your teacher wants you to do?
- Y N 8. Do you ever act "fresh" or "talk back" to your mother or father?
- Y N 9. When you make a mistake, do you always admit you are wrong?
- Y N 10. Do you feel that your parents always show good judgment; that is, do they always make good choices?
- Y N 11. Have you ever felt like saying unkind things to a person?

- Y (N) 12. Have you sometimes felt like throwing or breaking things?
- Y (N) 13. Do you ever let someone else get blamed for what you do wrong?
- Y (N) 14. Do you sometimes brag to your friends about what you can do?
- (Y) N 15. Are you always careful about keeping your clothing neat and your room picked up?
- Y (N) 16. Do you ever shout when you feel angry?
- Y (N) 17. Do you sometimes feel like staying home from school even if you are not sick?
- Y (N) 18. Sometimes, do you wish your parents didn't check up on you so closely?
- (Y) N 19. Do you always help people who need help?
- Y (N) 20. Do you sometimes argue with your mother to let you do something she doesn't want you to do?
- Y (N) 21. Do you ever say anything that makes somebody else feel bad?
- (Y) N 22. Do you think your teachers know more about everything than you do?
- (Y) N 23. Are you always polite, even to people who are not very nice?
- Y (N) 24. Sometimes, do you do things you've been told not to do?
- Y (N) 25. Do you ever get angry?
- Y (N) 26. Do you sometimes want to own things just because your friends have them?
- (Y) N 27. Do you always listen to your parents?
- Y (N) 28. Do you ever forget to say "please" and "thank you"?
- Y (N) 29. Do you sometimes wish you could just play around instead of having to go to school?

- Y N 30. Do you always wash your hands before every meal?
- Y N 31. Do you sometimes dislike helping your parents even though you know they need your help around the house?
- Y N 32. Do you ever find it hard to make friends?
- Y N 33. Have you ever broken a rule?
- Y N 34. Sometimes, do you try to get even when someone does something to you that you don't like?
- Y N 35. Do you sometimes feel angry when you don't get your way?
- Y N 36. Do you always help a hurt animal?
- Y N 37. Do you sometimes want to do things your parents think you are too young to do?
- Y N 38. Do you sometimes feel like making fun of other people?
- Y N 39. Have you ever borrowed anything without asking permission first?
- Y N 40. Do you sometimes get mad when someone disturbs something you've been working on?
- Y N 41. Are you always glad to cooperate with others?
- Y N 42. Do you ever get angry when your best friend wants to do something you don't want to do?
- Y N 43. Do you sometimes wish that the other kids would pay more attention to what you say?
- Y N 44. Do you always do the right things?
- Y N 45. Are there some times when you don't like to do what your parents tell you? (Mind your parents?)
- Y N 46. Are there times that you don't like it if somebody asks you to do something for him?
- Y N 47. Do you sometimes get mad when people don't do what you want them to do?

APPENDIX 2

GENERAL INSTRUCTIONS AND SPECIFIC INCENTIVES
ADMINISTERED TO THE SUBJECTS

APPENDIX 2

GENERAL INSTRUCTIONS AND SPECIFIC INCENTIVES ADMINISTERED TO THE SUBJECTS

General Instructions:

The examiner instructed the subjects in the following manner:

I want you to cross out all threes and sevens like this [the examiner holds up sheet and cancels the first number three by drawing a diagonal line from left to right through the number] on a line from left to right. When you finish the first line, go on to the second line [the examiner demonstrates], then to the third line and so on until I tell you to stop. Cross out every three and seven you can find and no other number. Any questions? [The examiner answers any questions and makes the necessary demonstrations.] Now, remember, cross out all threes and sevens. Keep working until I tell you to stop.

The administration of the incentives took place immediately after the general instructions were completed.

Normative Incentive:

"Most children your age do very well on this task."

Competitive Incentive:

"You have a chance to win a prize."

Control:

No statement was made.

APPENDIX 3

NUMBER-CANCELLATION TASK SHEET AS IT WAS
PRESENTED TO THE SUBJECTS
BY THE EXAMINER

231570554514871389769731211742433619380649540367680709243310615703135257048
092439795793732726216102097839891602596681443113225485955043603507495161718
693812885920478131817263352392010810636083799865264420035018595701122574418
854749719288220317195493101837105373240494051997554433911016382680842937948
246274486306173107792779568721408944378100922453713305522232628710504942362
259934350836223758533087030872456230449184187215691206780307637751894193692
071378832998885682642079491718906377926554806343867624990611500517880594251
327979300955751695384195906558525556314831579905293072952230566713566695917
454733505502823746900862470886837440332290194258413311800499189322966168670
453441614895123764485654675756825216682659434378665414445489528620756797687
952301096211543324285488222647436405847577738452746733889742350176258435065
092982253295996716879953622034884388491965017462453674421343808347169510513
068507403652571095278388045320946474699386919322542765061587445695816719378
230001636154883165432324564755103027101760012373304786938040735083262397591
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APPENDIX 4

ABSTRACT OF

Need for Approval and the Effects of Normative
and Competitive Incentives on Children

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Need for Approval and the Effects of Normative and Competitive Incentives on Children¹

The study was designed to demonstrate the importance of the personality of the child as a determinant of the effectiveness of different incentives. Accordingly, the responses of eight- to ten-year-old boys and girls high and low in need for approval under three incentive conditions were compared. The two levels of need for approval were differentiated by Crandall, Crandall and Katkovsky's Children's Social Desirability Questionnaire; the administration of the incentives took place at the beginning of a multiple-trial number-cancellation task. A group of one hundred and twenty children, consisting of an equal number of boys and girls at each of the two levels of need for approval, were randomly assigned to one of three incentive conditions: normative, competitive or control.

The null hypotheses were: (1) there is no significant difference in the number of correct digits cancelled between the incentive conditions; (2) there is no

¹ Murray Brown, doctoral thesis presented to the Faculty of Psychology of the University of Ottawa, Ontario, October 1973, xi-137 p.

significant difference in the number of correct digits cancelled between high and low need for approval subjects under the different incentive conditions; (3) there is no significant difference in the number of correct digits cancelled between male and female subjects under the different incentive conditions. The first two null hypotheses were rejected; the third was not. However, in the light of a differential performance of the sexes over trials, support was found for the conclusion that the hypothesized relationship between sex and incentive occurs after the respective sexes reach their asymptote.

The results of the study were interpreted in terms of the differential manner by which children seek approval and esteem.