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ABSTRACT

This paper is a preliminary report of a project designed to determine the family and other environmental factors which are associated with effective functioning in children from low income environments. The purpose of the project was to determine the strengths in poverty situations which should be capitalized on in developing educational programs and to learn more about children's coping and adaptive mechanisms in general. A total of 143 low income black children served as subjects in the pilot study. The Stanford-Binet was administered to each child. The attitudinal variables of need for achievement, delay of gratification, reflectivity and internal-external control were assessed using individually administered tests and an experimental choice situation. Behavioral adjustment was measured through behavior ratings by classroom teachers. Results indicated that the measure of need achievement showed no relationship to other attitudinal variables, behavioral adjustment, chronological age, or mental age. The motor inhibition test of impulsivity was significantly related to mental age, but showed no relationship to chronological age, behavioral adjustment, or the measures of attitudinal development. The negative internal control subscale was associated with chronological age only. No significant relationships were found for the positive internal control dimensions or delay of gratification. (Author/MS)

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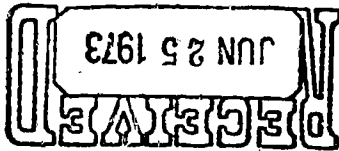
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The Personal-Social Competence Development of Low-Income Children

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As a growing number of investigators attempt to describe, alter, and explain the "disadvantaged" child and his world, a striking paradox is being revealed. The psychological literature is replete with findings concerning the functioning of low-income children which lead some to view this class of youngsters as "victims" in what has been termed a "social pathology" model of development. Predominantly featured in such explanations are the failure to use language as a tool of thought, inability to delay gratification or work for long-term rewards, lack of motivation, and a long list of deficits. While the destructive effects of poverty and discrimination cannot be overestimated, it is apparent that there are most certainly ghetto children who function effectively, despite, and, in some cases, as a result of, their life circumstances. We see this anecdotally viewing the behavior of certain children in programs at the Demonstration and Research Center for Early Education (DARCEE). These children, selected on the basis of family economic variables, nonetheless are cognitively, affectively, socially, and motivationally equipped for the demands of life. It is also evident from dealing clinically with groups of low-income parents and teenagers, some of whom have adapted in the face of extremely difficult life circumstances by developing a wide range of competencies.

This paper is a preliminary report of a project designed to determine the family and other environmental factors which are associated with

effective functioning in children from low-income environments. This objective is sought not only from the perspective of determining the strengths in poverty situations which should be capitalized on in developing educational programs, but also from the vantage point of learning more about children's coping and adaptive mechanisms in general.

This report begins with an analysis of the term "competence." In any attempt to look evaluatively at a process, some consideration must be given to its meaning. The terms we use carry with them a freight of implicit assumptions that directly influence the process of research. A major stumbling block in an analysis of research is that concepts are used in various ways by various investigators. This problem is particularly acute given the global nature of competence linked by many theorists to such behavioral phenomena as self-esteem, achievement motivation and many other social, motivational, and cognitive dimensions.

Conceptualizing the Nature of Competence

The notion of "competence" gained particular prominence in developmental research following an essay by Robert W. White in 1959. In this classic paper, White postulated that man shares with other mammals an intrinsic motivation toward competence--toward effective interaction with the environment. It was White's contention, however, that the motivation needed to attain competence could not be wholly derived from the "drives" of the motivational theory that until recently prevailed in experimental psychology, or the quiescence-seeking instincts of Freudian psychoanalysis. White cited evidence to support an independent and distinct role for such motivation, which he labeled effectance, to account fully for man's capacity to deal effectively with his surroundings. For White, effectance

incorporates an important motivational ingredient overlooked by traditional theories, namely, the feedback that the developing person receives from the consequences of his active commerce with the environment.

White's conception of competence centers on biological origins and the developmental vicissitudes of individual motivation. More recent connotations of competence have reflected contemporary concern with its societally relevant outcomes. Inkeles (1966) proposed a definition of competence that stresses the societal referent: "the ability to attain and perform in three sets of statuses: those which one's society will normally assign one, those in the repertoire of one's social system that one may reasonably aspire to, and those which one might reasonably invent or elaborate for oneself [p. 265]." Inkeles suggests that the study of socialization be approached from the standpoint of societal expectations and socialization outcomes rather than from that of biological origins and the impact of child rearing practices.

Gladwin (1967), in a report on a conference of mental health professionals held at the National Institute of Mental Health, offered a conception of social competence similar to Inkeles'. He proposed that competence develops along three closely related axes: (1) the ability to learn or to use a variety of alternative pathways to achieve one's goals, (2) the ability to utilize the resources of a variety of social systems, and (3) the capacity to effectively test reality. Programs of intervention appropriate to this conception were seen by Gladwin as operating primarily through the provision or adaptation of a social environment designed to maximize rewarding and effective social experience. The modality through which such an experience must be achieved was referred to as an "ecological unit" encompassing within a single interacting system the individual and

as much of his social environment as is relevant to the behavior under consideration.

Gladwin's approach to programs of remedial intervention draws heavily on the earlier formulation of "interpersonal competence," as introduced by the research of Foote and Cottrell (1955) in their programmatic framework for family research. Seeking an evaluative concept for planning research, these authors conceived of interpersonal competence as skill or ability "in controlling the outcomes of episodes of interaction [p. 36]," and as comprising six main components: health, intelligence, autonomy, empathy, judgment, and creativity. Their suggestions for research were organized around assumptions concerning the antecedents and correlates of each of these aspects.

In Social Psychology and Human Values, M. Brewster Smith (1969) has pointed out that the alternative versions of competence offered by Inkeles and by Foote and Cottrell correspond rather neatly to the two major strains in modern sociological role theory. For both, competence is a matter of capacities for role performance. They differ, however, as to the framework within which role performance is conceived. Inkeles' views are in the structural tradition of role-status theory. In this tradition, adequacy of role performance is to be measured against the role requirements of the various positions in the social structure that a person may occupy. Foote and Cottrell, on the other hand, embody the symbolic interactionist tradition stemming from George Herbert Mead (1934). Emphasis in this line of thinking is on interactional process in role relationships that are conceptualized primarily in interpersonal rather than socio-structural terms. Smith has stressed that there need not be a discordance

between these versions--indeed a comprehensive view of social competence should incorporate "effective role performance for self and for society [p. 214]."

The implications of this conception of competence for the study of personal and social development are far reaching in psychological research. The empirical assumption inherent in the work of many contemporary theorists is that there is a core of interrelated personal attributes which in some way plays a crucial role in a person's effectiveness in interaction with the environment. These variables--including motives, values, beliefs, and orientations--are seen as relatively enduring attributes of the "competent self."

Against this background, a number of themes have emerged which are intended to refer broadly to various kinds of dispositions and behavioral tendencies relevant to competence. The most extensively studied has been the "need for achievement" defined by McClelland (1953) as a tendency to strive for success when one's performance is evaluated against a standard of excellence. Implied in this concept is the desire to learn something new, to improve one's performance, and to do for oneself rather than being done for. This motive, measured usually in fantasy productions, has been found to be positively related to socioeconomic status (Bruckman, 1966; Nuttall, 1964; Rosen, 1959). High need for achievement has also been found to be associated with achievement training by both parents and early home training in independence by the father (Atkinson & Feather, 1966; McClelland, 1961; Rosen & D'Andrade, 1959).

Another predisposition which is strongly associated with personal-social competence is Rotter's sense of personal or internal control of the environment (Rotter, Seeman, & Liverant, 1962). This construct is

described as a generalized expectancy regarding the extent to which significant events are perceived to occur as a function of one's own behavior (internal control) or as a function of forces outside one's personal control (external control). In its broadest meaning, it refers to the degree to which people have a sense of efficacy, or power, and accept personal responsibility for what happens to them. Rotter (1969) has suggested the relationship of perceived internal versus external control to achievement motivation, to White's conception of competence motivation, and to a sense of powerlessness as in the sociological concept of alienation (Seeman, 1959). It has been applied more specifically to youngsters in intellectual achievement situations through a questionnaire which assesses the extent to which favorable reactions from parents, teachers, and peers are believed by the child to depend either upon the quality of his own efforts or upon factors such as luck or the personal bias or whim of the evaluator (Crandall, Katkowsky, & Crandall, 1965). Perceived internal control has been found to be stronger in the middle class than in the working class (Crandall et al., 1965; Battle & Rotter, 1963), and in white children and adults than in blacks.

The notion of "ego strength" has figured prominently in discussions of personal-social competence. Considered judgment and persistence in contrast to impulsiveness have been considered noncognitive traits involved in the successful application of intelligence to problem solution. Empirical support for this contention has come from studies showing the relationship between measures of impulsivity and other criteria of intelligence or intellectual accomplishment. Adolescents characterized as impulsive because they were delinquent (Corotto, 1961), or because they were so rated by teachers and supervisors (Spivack & Levine, 1963), were found to

perform poorly on intelligence tests. Special measures of impulsivity (e.g., drawing a line as slowly as possible; controlled association; time sense) also correlated negatively with intelligence-test performance. A few studies have related these dispositions to social adaptation. A lack of persistence, evident since childhood, was one of the outstanding traits of Terman and Oden's (1947) underachieving superior individuals. Davids and Sidman (1962) showed that bright (as measured by I.Q. tests) under-achievers were relatively more impulsive than successful students who were equally bright. Spivack and Levine (1963) found that tests of impulsivity tended to differentiate well-functioning normals from adolescents of above average intelligence who had been referred for residential treatment.

Still another line of investigation is Mischel's work (1966) on delay of gratification. These studies typically employed a research paradigm in which subjects are confronted with real choices between immediately available but less valued rewards as opposed to delayed but more valued outcomes. The results provided evidence that delay responses are relatively consistent, tend to increase with age, and are systematically related to a number of variables which are subsumed under the general concept of adjustment. Studies have demonstrated positive relationships between the tendency to delay gratification and measures of social responsibility, achievement motivation, and certain rearing conditions.

This brief overview of concepts and themes is representative of a terrain of relevance in contemporary research: students of behavior have been converging on a group of self attitudes and personal orientations that are assumed to bear upon the extent to which a child is oriented to make the most of his opportunities in the world. Both correlational and experimental studies have met with theoretical success. The almost

universal outcome has been the demonstration of large differences between the middle classes and the poor on such enduring attributes as values, beliefs, and aspirations. Consistently the middle class child rates high. Summaries and generalizations conclude that the lower class child places far less value on achievement, education, and morality. They have found that lower class children, particularly lower class black children, feel less of a sense of internal control and are less willing to wait for gratification.

Explanations of the cause and effect relationship between the lack of work-relevant dispositions found among lower class children and the lower class life have been at best sketchy and have often been based on causal speculation. Serious gaps exist in the available body of knowledge concerning the differential effects of childhood experiences, especially those characteristic of a poverty environment, upon task-oriented behavior, attitude, and coping style. In general, research relating personal-social competence to achievement dispositions has provided many promising leads but little firmly established information. At this point, too many of the variables lack conceptual clarity, too many of the measures or measurement techniques have doubtful validity, and too few have been employed consistently across different studies. Perhaps the most crucial deficiency is the lack of a broad theory capable of encompassing and integrating the findings just summarized.

It was against this background that this project on the development of personal-social competence of low-income children began. Faced with an inadequate empirical foundation from which to begin our work, we reasoned that our first priority was to specify and refine the profile of psychological characteristics associated with competence. Our interest,

therefore, over the past year has been directed toward a series of investigations designed to produce dependable information on the effective functioning of the low-income child. This report presents the findings of the first phase of our research.

Quantitative Methods for Studying the Development of Competence

The central purpose of our project was to search for environmental factors associated with effective personal-social functioning in children from low-income homes. Over the years, we have come to the increasing realization that these factors are not just the outcome of early life experiences. They also reflect variations in cultural background and later life experiences. From observing the behavior of young children in our intervention programs, we believe we have acquired a fair amount of information concerning the nature of these variables. They have to do with resourcefulness, planning, foresight, self-conceptions, etc. These dispositions seem to play an important role in coping behavior and are far too vital to go untouched by direct inquiry.

In the process of following-up a DARCEE intervention study, a battery of tests was constructed to assess these motivational links in the personal-social development of the children. This battery supplemented the originally planned intellectual, cognitive, and achievement measures. The attempt was made to select easily administered instruments which are suitable throughout the 4-9 age range, have some established psychometric properties, and cover a wide range of personal-social behaviors. Our review of the literature earlier indicated a cluster of self-attitudes and personal orientations associated with competence: need for achievement, internal versus external control, reflectivity, and the ability to delay

gratification. We decided, therefore, to focus our research on these four solidly established concepts and their general predictive utility as factors influencing a wide variety of performance behavior.

Initially, we intend to make a start in determining the validity of this battery by relating it to other measures we have on the children, administering it to other groups of children, and doing a preliminary post hoc exploration of the correlates of the battery with information we have collected over the past several years on the children and their families. A partial result of this effort will be a revised version of this battery.

Eventually, we plan to isolate two groups of children on the two extremes of adaptive behavior and trace these children's development more systematically through DARCEE archives. These records include previous intellectual and personality assessments, and most importantly, detailed records on some of the children concerning their families and their early development. (These detailed records will involve children who were visited in their homes in a variety of DARCEE home visiting programs.) Hypotheses generated through this effort will be investigated using other samples of children and a variety of measurement procedures.

For this report, we deal directly with only the assessment battery and findings from a preliminary study employing this battery.

PILOT STUDY

Sample

In the present study, 143 low-income black children served as subjects. All of the children had been associated over the years in one way or another (experimental subjects, control subjects, siblings) with the DARCEE intrafamily (vertical diffusion) study (Gilmer, 1969; Gilmer,

Miller, & Gray, 1970). These children had originally been selected from a large predominantly black housing project whose inhabitants would be considered moderately disadvantaged. Table 1 presents the age characteristics of the children in the study.

Table 1

Age Characteristics of Children Included in the Study

Grade	Characteristics		
	N	Mean (Yrs.)	Range (Yrs.)
First	28	7-0	6-7 - 8-1
Second	35	8-1	7-0 - 8-8
Third	56	9-0	7-7 - 10-4
Fourth	24	9-10	9-5 - 10-4

Description of Assessment Techniques

Three general types of procedures were used to assess the major variables of the study. In phase one of the study the Stanford-Binet was administered individually to each child. In a second phase the attitudinal variables of need for achievement, delay of gratification, reflectivity, and internal-external control were assessed using individually administered tests and an experimental choice situation. Behavioral adjustment was measured through behavior ratings by classroom teachers. The major assessment instruments used are described below.

Measurement of achievement motivation. Achievement motivation was measured in the form of an open-ended aspiration question developed by

Mischel (1961). The question is introduced in the context of "Let's pretend there is a magic man. Now let's pretend that the magic man who came along could change you into anything you wanted to be. What would you want to be?" Subjects were asked to answer in one word. After the first response was given, the question was asked: "What else would you like to be?" Responses were classified into "Occupational" responses and "Trait" responses, the latter being further subdivided into "Achievement Traits" and "Personal Traits." The first category included all responses mentioning an occupation or profession (e.g., teacher, pilot, doctor, architect); the second included all responses mentioning personal traits that appeared to be directly achievement-related (e.g., important, smart, successful); the third contained all other responses, and consisted of traits that are not explicitly related to achievement (e.g., sweet, big, older, honest, pretty). The primary conceptual distinction between the aspirations in the first as opposed to the second and the third categories is that the former are clearly long-term aspirations of a career type, whereas the latter are not necessarily long-term goals, and are not explicitly career goals, but rather personal attributes. Subjects were scored from 2 to 0 for each response according to whether they gave an Occupational response, Achievement Trait response or a Personal Trait response, respectively.

Mischel (1961) investigated the usefulness of this short-cut method for measuring need for achievement (n Achievement) by examining the relationship between the responses in each of the three categories and the mean n Achievement scores as measured in response to the more standard TAT-type assessment procedure of scoring fantasy material. The n Achievement mean of subjects giving occupational responses as compared to all

others was found to be significantly higher ($t = 3.88$; $p < .001$). Similarly, comparison of the mean n Achievement of subjects giving occupational responses resulted in a t of 4.54 ($p < .001$), the former having n Achievement scores significantly higher than the latter. A Pearson correlation of .41 ($p < .001$) was found between Occupational responses, Achievement Trait responses, and Personal Trait responses (assigned values from 2 to 0) and n Achievement scores.

Measurement of reflection-impulsivity. To measure reflectivity, "Draw a Line Slowly" (DAL)--a motor inhibition test devised by Maccoby, Dowley, Hagen, and Degerman (1965)--was employed. The test consisted of a picture of two telephone poles with three wires between them and a fourth wire conspicuously missing. Subjects were first given practice drawing lines with a ruler and pencil on a blank sheet of paper. The experimenter then showed the picture, pointing out the missing wire, and the subject was told to draw in the missing wire with a ruler. The task was administered a second time. This time, however, the subject was instructed to draw the wire in "as slowly as you can." Scores on this dimension were obtained by subtracting the time taken to draw the line on the first trial from that of the second trial.

Measurement of internal-external control. The measure that was used to assess internal-external control was a 15-item cartoon test originated by Phypers (1969). Phyper's I-E Scale is an adaptation for grades 1-3 of the Intellectual Achievement Responsibility Questionnaire developed by the Fels Institute (Crandall, Katkovsky, & Crandall, 1965). The I-E Scale consists of cartoons relating to a variety of achievement and personal events in the school setting. For each event, the child is asked to choose one of two reasons (an internal or external control

alternative) which best describes why that event might happen to him. Internal control alternatives reflected personal efforts or mistakes which were viewed as having direct effect on the outcome of events. External control alternatives included luck, chance, or the capricious moods or actions of others.

In the present study, a revision of Phyper's original cartoon format was made in which black children were depicted in the cartoon situations. Total I-E scores were computed by summing the number of items in which the internal alternative was chosen. Separate sub-scales for positive and negative events were also computed. Phypers (1969) obtained good reliability for the I-E Scale for grades 1-3. Evidence for construct and discriminant validity is reported fairly extensively in the literature.

Measurement of delay of gratification. An actual choice between a small school related reward item now or greater similar reward item later was used to assess the tendency to delay gratification. As in previous studies (Bialer, 1961; Mischel, 1961; Phypers, 1969), this choice was offered as a "reward" for participating in the experimental tasks. To increase the desirability of the reward, each child was allowed to pick from three objects (an eraser, a miniature puzzle, a coloring book) the prize that he would most like to have.

Pushing the chosen object toward the subject, the experimenter asked each child:

Which do you want, this _____ (name of object) right now, OR two _____s (name of object) in one week (holding up two)?

If the subject chose "Now," he was given the single reward at once. If "Tomorrow" was chosen, the reward was put into a large envelope, upon

which the experimenter wrote the child's name and grade. The subject was then told that his teacher would give him the envelope in one week.

At the conclusion of the experimental procedure, each subject was told:

Thank you very much. Now I'd like you to do me a favor. Let's not tell the other children what we did here--or that you won a prize.

Teacher rating procedure. In order to assess behavioral adjustment in the school setting, the "Pupil Behavior Rating Scale" (PBR) developed by Bower (1960) was given to each classroom teacher. The scale includes a wide variety of specific behavioral descriptions which are defined to constitute a presence or lack of adjustment. Teachers were asked to rate the extent to which the child's conduct, as observed in the school setting, approximated each behavioral description.

Results

Intercorrelations Among the Measures

Table 2 presents the intercorrelations among the measures of attitudinal development. Product-moment correlations between these attitudinal measures and the total scores for behavioral adjustment are presented in Table 3. There are several interesting points to be noted from these data.

First of all, no significant relationships were found among measures of need for achievement, reflection, internal-external control, and delay of gratification. There was a tendency for high internal control over positive events to be related to need for achievement; however, this correlation fell short of statistical significance. It can also be seen that there was little association between positive and negative items on the I-E scale. Finally, and contrary to what might be anticipated, no

relationship was found between measures of attitudinal development and behavioral adjustment.

Table 2
Intercorrelations Among Attitudinal Measures

	DAL	IE-	IE+	IEtot	Delay of Gratification
Achievement Motivation	-.004	-.033	.157	.048	.017
DAL	1.000	.079	.011	.062	-.002
IE-		1.000	.125	.839**	.079
IE+			1.000	.612**	.078
IEtot				1.000	.106

** $p < .01$

Table 3
Product-Moment Correlations Between
Attitudinal Measures and Total PBR Adjustment Scale

	Achievement Motivation	DAL	IE-	IE+	IEtot	Delay of Gratification
PBR	.012	.151	-.015	-.004	.000	.099

Chronological Age Differences

Chronological age was expected to be positively related to several major variables in the study. Table 4 presents product-moment correlations between this developmental dimension and each attitudinal measure.

Although a positive relationship was expected between age and delay of

gratification, none was found. A strong association was found between age and feelings of internal control; however, this finding was significant only for scores reflecting feelings of personal control over negative events ($r = .301$; $p < .001$). No relationships were evident between age and measures of need for achievement, reflectivity, or behavioral adjustment.

Mental Age Differences

Intelligence was another important factor discussed earlier as influencing certain variables in the study. As reported in Table 4 below, mental age showed a positive relationship to measures of reflectivity and behavioral adjustment. Contrary to what might be expected, no relationship was found between age and delay of gratification. Age showed no relationship to either I-E control or need for achievement.

Table 4

Product-Moment Correlations Between
Developmental Dimensions and Noncognitive Measures

	Achievement Motivation	DAL	IE-	IE+	IEtot	Delay of Gratification	PBR
CA	.115	.087	.301**	.113	.300**	.074	-.011
MA	-.015	.282**	.073	.060	.105	.034	.221*

* $p < .05$

** $p < .01$

Discussion

This study provides a puzzling but interesting set of results. Following is a review of findings. The measure of need for achievement showed no relationship to other attitudinal variables; nor was it related to behavioral adjustment, chronological age, or mental age. The motor inhibition test of impulsivity was significantly related to mental age, but showed no relationship to chronological age, behavioral adjustment, or the measures of attitudinal development. The negative internal control subscale was associated with chronological age only. No significant relationships were found for both the positive internal control dimension and delay of gratification.

Two issues emerge in the light of these data. The first, a methodological issue, concerns the reliability and validity of the test measures developed to assess each of the major variables. The second issue, a substantive and theoretical one, concerns the usefulness of these concepts as effective predictors of competence in the low-income child.

Achievement Motivation

As discussed earlier, the concept of need for achievement is one which at first glance appears to have much in common with competence motivation. There appear, however, to be several difficulties with the Achievement variable as embodied in the fantasy-based measure from which McClelland's aspiration question was derived. These difficulties have been recently reviewed by Smith (1968). As Smith has suggested:

There are questions about its generality, its applicability to women, its openness to influences that contaminate its value as a measure of motivation. The findings in regard to its relationships to achievement-oriented behavior have been ambiguous, except as a predictor of entrepreneurial striving in business men. Given this less than encouraging

record, one suspects that there has been slippage between the theoretical definition of the motive and what has actually been captured in the measurements [p. 242].

The question of the generality of the achievement motive is especially relevant to the present research. What has been interpreted as a lack of achievement motivation in low-income black pupils may well be a matter of such motivation being directed into nonintellectual pursuits. Indeed achievement research over two decades has found little conclusive evidence concerning differences between black and white children on Achievement. These findings and the lack of relationships involving achievement motivation in the present study suggest that the global concept of achievement motivation is too broad, and it may be useful to replace this construct with motives that relate to more specific behaviors. Individuals strive to become competent in different areas, and the motivations for these strivings are multiple. Comprehension and prediction of these phenomena might be enhanced if there was some differentiation among the behaviors and motives that are involved in task mastery.

Delay of Gratification

The procedure used to assess the ability to delay gratification closely resembled those used in the majority of studies in the literature. These investigations have found several behavioral, affective, and demographic correlates of delay behavior, and lend support to the assumption that the ability to delay gratification is a general trait or dimension of personality and that choice of immediate or delayed rewards is a reliable and valid measure of this trait. Recently these conclusions have been open to some question. Existing findings in the literature, most of which are reviewed by Phypers (1969), point to the highly variable nature of the

traditional operational paradigm used to assess delay of gratification. They suggest that choice of immediate or delayed rewards is strongly influenced by a wide variety of situational factors which are difficult to control experimentally and which contribute to a generally unstable measure of delay. For example, numerous studies which have experimentally manipulated the contingencies involved in the choice procedure have found an increase in the tendency to choose immediately available awards a function of (1) length of delay interval (Mischel & Metzner, 1962), (2) the experience of general criticism of a subject's performance before being offered the choice (Shybut, 1965), and (3) the requirement to successfully complete an experimental task in addition to waiting in order to obtain a larger, future reward (Mischel & Staub, 1965). As previously noted in the studies of Mischel (1963), Lawton (1963), and Mischel and Metzner (1964), differences have also been found when different experimenters have been used in the same study.

Although there was an attempt in the present study to hold the above factors constant, with the exception of the number of experimenters, it is not surprising that no relationships involving the tendency to delay gratification were found. It has been speculated that the inadequacy of traditional delay measures may be in part a function of the operational paradigm of choice between a small reward now or a large reward later which appears to conform to few behavioral examples of tendency to delay gratification discussed in the literature (Phypers, 1969). In future research, operational procedures must have more importance or relevance for subjects within the context of everyday life. The behaviors which we seek to assess need to be based upon situations which typically occur or would be potentially relevant within the environment in which subjects must function.

Reflection-Impulsivity

Studies showing relationships between measures of impulsiveness and both intelligence and social adaptation have provided some degree of support for a view of competence which tries to relate affect, drive, and cognitive activity in the same theoretical system. In the present study, the motor inhibition test of impulsivity, Draw a Line, was significantly related to mental age. The results also indicate that scores on this measure show a tendency to be related to behavioral adjustment ratings. While these results are in agreement with theoretical expectations, there is some reservation concerning the relevance of our findings for the concept of impulse control. As in previous studies (Maccoby, Dowley, Hagen, & Degerman, 1965; Spivack, Levine, & Sprigle, 1959), high IQ children were more capable of inhibiting movement when instructed to do so. The question arises whether they have better impulse control or whether they are more able to follow any directions better than their low-IQ counterparts. Informal observations during the present study suggested that the latter is a plausible alternative. It is apparent, in any case, that the degree to which the capacity to inhibit movement may be interpreted as impulse control requires further investigation.

Internal-External Control

While generally adequate reliability and validity have been reported for the I-E scale for grades 1-3, the measure's internal consistency has been shown to be fairly low (Phypers, 1969). This finding indicates that internal-external control is a somewhat heterogeneous dimension and does not, as the literature suggests, reflect a generalized aspect of personality. The possibility of this assumption receives additional support from

the present study. Lack of significant correlations between positive and negative items on the I-E scale suggest that children's feelings of internal control over positive events are not related to their feelings of internal control over negative events, thus indicating two possibly separate dimensions of internal-external control. Moreover, only the negative internal control scores showed a significant relationship with other major variables (i.e., chronological age).

Further evidence for a situational aspect of internal control has been provided in a recent study by Williams (1971). Williams found that in conditions of reduced expectancy for success and low reinforcement value, external locus of control subjects behaved externally in accord with the generalized characteristic of the I-E construct. However, in situations characterized by high levels of expectancy and reinforcement value, external locus of control subjects behaved in an internal manner--quite in contrast to expectations based upon a generalized I-E classification.

Existing findings in the literature, as well as those discussed above, suggest that both generalized and situational determinants are operative in influencing a person's sense of internal control. If feelings of personal control are in fact highly dependent on factors particular to given kinds of situations, such factors must be taken into account. Future research should move toward further utilization and clarification of these variables, especially when generalized expectancies fail to successfully predict behavior.

In summary, our research has sought correlations among diverse indices of competence, e.g., need for achievement, reflectivity, sense of internal control, the ability to delay gratification. The overall results indicate a considerable degree of situational specificity. Very few relationships

reached statistical significance at or beyond the .05 level. Most conspicuous is the lack of significant relationships between these indices and ratings of behavioral adjustment in school. These findings suggest that the current notion of these traits as highly generalized dispositions of the "competent self" is an oversimplification.

Concluding Remarks

Of crucial importance is the need for research that encompasses more of the links in the causal chain. What learning experiences influence a child's acquisition of a particular coping strategy, or his decision that it is appropriate in a particular situation? This question is crucial for understanding the development of personal-social competence, and it cannot be answered adequately without careful consideration of the culture in which a child lives or the environment in which his previous learning experiences occurred.

Assuming that our goal is to provide effective education for everyone, our task must be to determine the conditions under which various processes are manifested and to develop techniques for seeing that these conditions occur in appropriate educational settings. The problem of transferring skills applied on ghetto streets to the classroom is not solved by demonstrating the existence of the skills on the streets. Both the child and the school must be taught how to maximize those skills for classroom learning. This is an enormous task. For not only will it be necessary to develop the requisite knowledge and understanding, but it will also be necessary to feed the new knowledge past cultural barriers and into the structure of society's institutions.

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