

A STUDY TO DETERMINE SOME RELATIONS BETWEEN CHANGES IN
READING SKILLS AND SELF-CONCEPTS ACCOMPANYING
A REMEDIAL PROGRAM FOR BOYS WITH LOW
READING ABILITY AND REASONABLY
NORMAL INTELLIGENCE

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CHAPTER I

INTRODUCTION

Statement of the Problem

The problem of this study was to determine some relations between changes in reading skills and changes in certain selected aspects of self-concept accompanying a remedial-reading program for elementary school boys with low reading ability and reasonably normal intelligence.

Attempts were made to answer these questions: (a) Are the self-concepts of the boys who participate in a clinical remedial-reading program related to their reading abilities? (b) Are the self-concepts of these children significantly different from the self-concepts of a comparable group of pupils who do not qualify for reading clinic programs because they are not handicapped by reading deficiencies? (c) Do the self-concepts of the reading clinic pupils change significantly after approximately one semester of clinical experiences? (d) Are the reading clinic boys' changes in self-concept related to corresponding changes in their reading abilities?

Development of this problem was centered around these areas: (a) identification and description of self-concept,

- (b) measurement of self-concept and reading skills,
- (c) relations between self-concept and reading levels, and
- (d) changes in self-concept and reading levels related to experiences in a clinical remedial-reading program.

Hypotheses

Solution to the problem and answers to the four questions were sought by statistically testing the tenability of these hypotheses: (a) For boys with approximately normal and equal language factors of intelligence, levels of personal, social, and total aspects of self-concept are positively associated with levels of vocabulary, comprehension, and total reading skills. (b) For boys with approximately normal and equal language factors of intelligence, there is a significant difference between the levels of self-concept of pupils with persistent reading problems and the levels of self-concept of pupils with reasonably normal reading abilities. The null hypothesis, that no significant population difference exists between the mean self-concept levels of the experimental and control groups, was the one statistically tested. (c) Changes in the levels of personal, social, and total self-concepts are associated with experiences in a clinical remedial-reading program. The null hypothesis was tested statistically. (d) Changes in the levels of personal,

social, and total aspects of self-concept, associated with experiences in a clinical remedial-reading program, are each positively related to corresponding changes in vocabulary, comprehension, and total reading levels.

Background and Significance of the Study

Numerous experimental studies have been made in the area of remedial reading; attempts have been made to provide a better understanding of the factors associated with the child's inability to read the printed page sufficiently well to meet our school standards (16, p. 1). The modern schools' demands for reading comprehension--and, to a lesser degree, speed--have been exceedingly great. Many pupils have been found to be operating on a reading level far below that required of them. Frequently, about one fourth of a class has been considered to be encountering serious reading difficulties (17, p. 922). This has called to the attention of educators the vital need for preventive and remedial measures to combat reading deficiencies (34, p. 69). It has been well established that the reading ability of the reasonably normal child can be improved; there seems to be little doubt regarding the value of diagnostic and remedial instruction (17, p. 923). Yet, there still is an urgent need to redefine remedial reading techniques and to study carefully the individual needs and deficiencies of children who fail to learn sufficiently in

regular classroom situations (17, p. 923). The need for this type of study lies within the needs of the child himself. A better picture of the learner and of the factors which influence learning appears to be appropriate and necessary for improvement of the teaching-learning process.

Experimental studies have shown that the reading process is a complex behavior influenced by many inter-related factors. Correlations of reading ability with intelligence are generally reported to be .50 or less, indicating that factors other than intelligence are related to reading achievement (17, p. 923). Emotional maturity and personality adjustment have been listed with intelligence, language development, sex, eye-hand dominance, socio-economic level, auditory discrimination, visual perception, physical defects, health, and others as factors which were considered to be associated with reading progress (26). Research must give more attention to such factors; the findings of these studies should be interpreted in terms of modern educational psychology and the principles of child growth and development (17, p. 923).

Considerable experimentation has been made in the area of personality and its relation to learning (16, p. 1). Personality is an elusive construct; yet, its significant role in helping parents and educators to understand children better is very essential to good instruction (32,

p. 633). Certain contemporary American psychologists have postulated that the concept of the self is the one measurable and consistent core of personality and that other observed traits are merely manifestations of the inter-related aspects of an individual's total personality (10, p. 26). The theories of Lecky, Rogers, Snygg and Combs, and others have stressed the individual's perception of himself as the central determining force which influences his behavior (24, p. 203). A poor self-concept leads to attempts of the thwarted person to defend himself against pressures and threats to himself (11, p. 135; 27, p. 500; 29, pp. 115-116). Feelings of insecurity, inadequacy, and inferiority hamper intellectual development. For example, the pupil's inability to attack new words in reading is claimed to reduce his confidence in his ability to read efficiently (14, p. 20). He considers himself to be a poor reader, and his inability to read effectively supports this self-image (13, pp. 14-15). Several studies of the self-concepts of adults, particularly those undergoing therapy, have been made, but relatively few such studies have been done with children (10, pp. 489-496; 24; 26, pp. 132-185).

Educators have begun to recognize the value of the self-concept as a construct which might be used in the investigation of psychological factors associated with learning and development (24, p. 203). School

administrators, teachers, counselors, psychologists, reading clinicians, parents, and other persons have begun to utilize this concept in their attempts toward a better understanding of the child as an integrated, striving, growing, and developing individual.

An approach to reading instruction like the one prescribed by Kottmeyer (11) has provided our schools with some important basic principles of diagnostic and remedial methods and techniques. Physical defects, eye movements, phonetics, mechanical instruments, and the like have received due consideration in the teaching of reading. This point of view seemed to stress the physical and atomistic causes of poor reading ability. Logical mechanistic thinking appeared to emphasize more instruction in the particular area of remedial reading needed by the child with reading difficulties.

An organismic and holistic psychological frame of reference seemed to give more attention to the individual's feelings, personal problems, removal of pressures, more permissive atmosphere, relaxation, and considerations of the whole child. Mechanical methods have been criticized on the grounds that they often treat symptoms rather than basic causes of maladjustment (35, p. 144). It has been concluded that a reading method which does not consider personality treatment should be discarded (4, p. 7).

Growth in reading ability has been considered as an aspect of the growth of the whole child (18, p. 978).

The "look-and-say" and "phrase" methods of reading instruction have placed more emphasis on Gestalt configurations and meaning in context (5, pp. 9-16). Grace Fernald has utilized several avenues of perception, including the kinesthetic sense, in the teaching of reading (7). Beulah Ephron has related the reading program to the underlying emotional factors and has made use of clinical case studies, interviews, and psychotherapy in her treatment of remedial reading pupils (6). Applications of the self-concept in terms of non-directive therapy (1) and play therapy (2) have been advocated for the improvement of instruction by Virginia Axline, Carl Rogers (27), and others. Various methods and techniques for the teaching of remedial reading have been described (9). Since the achievement of reading proficiency is part of the individual's total development (31, p. ix), and since many interrelated factors, including personality, influence reading progress, a somewhat eclectic and interdisciplinary point of view was taken for this study.

A large southwestern school system has operated five reading clinics for pupils with reasonably normal physical, intellectual, and emotional properties and with persistent reading problems. Attendance in the reading clinic was

voluntary and in addition to the regular academic program. Attempts were made to provide a balanced integrated combination of individual remedial-reading instruction with counseling and guidance in personality adjustment. The needs, purposes, interests, and abilities of each pupil received due consideration. Efforts to establish rapport with the child and to understand him empathically were sought and maintained during his clinical experiences. His interest in reading was encouraged through his own choices of reading materials on his own reading level. His self-confidence was bolstered through encouragement of initiative in reading activities and record-keeping, knowledge of his improvement, progress at his own rate, removal of pressures, and the like. Individual instruction, rather than the group instruction of the classroom, was the watchword of the clinical environment.

Such a remedial-reading program seemed to be based on organismic principles which stressed considerations for the whole child. It has been advocated that children with reading problems need more instruction in the mechanics of reading (8; 12). It has also been advocated that, for poor readers, changes in personalities will help bring about changes in reading abilities (6). This study raised a secondary question, "Is group or individual psychotherapy, separate from remedial-reading instruction, necessary or

can such instruction be given simultaneously in conjunction with therapeutic counseling and guidance to bring about expected reading and personality improvements?" No attempts were made in this investigation to compare directly the results of such separate and combined programs. However, in the testing of the tenability of the third and fourth hypotheses, the changes in self-concept and reading levels of the reading clinic pupils were compared with such changes of a control group. This gave some indication of expected changes for such groups of pupils and of the values of the type of clinical remedial-reading program utilized.

From this theoretical and practical background, it seemed appropriate to attempt to seek further evidence which might help to answer the primary question, "What relations exist between changes in reading skills and changes in certain selected aspects of self-concept accompanying a clinical remedial-reading program for elementary school boys with low reading ability and reasonably normal intelligence?" It was hoped that a clearer understanding of such relationships might emerge and have some implications for the improvement of the teaching-learning situation.

Definition of Terms

In this study the following terms have the indicated meanings:

"Clinical individualized instruction" was the teaching-counseling relationships experienced by the subjects of the experimental group in the remedial-reading clinic environment.

"Persistent reading problems," "reading deficiencies," and "reading retardation" referred to the low reading achievement levels of the experimental group members. These pupils were selected for the reading clinics because at the time of their admission they were operating on a total reading grade placement level of approximately two or more years below national statistical norms.

"Personal adjustment" was assumed to be "based on feelings of personal security" (33, p. 3). Its measurement and prediction were based on the personal adjustment scores made on the California Test of Personality.

"Personality" was considered a theoretical psychological construct (32, p. 590) "organized around the concept of life adjustment as a balance between personal and social adjustment" (33, p. 3). Its measurement and prediction were determined from the total adjustment scores made on the California Test of Personality.

"Reasonably normal" pupils were those boys selected for subjects of this study. Most of their intelligence quotients fell within the range of 85 to 115 (5, pp. 19 and 259) and were measured by the California Test of Mental Maturity. The mean intelligence quotient for the experimental group was 98.4. The mean individual test intelligence quotient for this group was 102.4 with a range from 90 to 114. The mean intelligence quotient for the control group was 94.1. This term disregarded pupils' differences in reading achievement. It eliminated pupils with outstanding physical and emotional defects, which were revealed by health histories and examinations recorded on cumulative records and in case study folders.

"Self-concept" was defined operationally in this study to describe the individual's feelings, beliefs, and attitudes which he perceived to be characteristic of himself (23, p. 204) as evidenced by his verbal, self-referrent (30, p. 242) responses to the items on the California Test of Personality. These responses were classified as personal, social, and total adjustments and were considered to be synonymous with personal, social, and total aspects of personality. It has been claimed that the acceptance, rejection, or ambivalence a person feels toward his self-concept is related to his adjustment (25, p. 155).

"Self psychologists" referred to those contemporary American psychologists who have postulated and emphasized a self-concept as the most important single human attribute--the key to understanding behavior (10, p. 26).

"Social adjustment" was assumed to be "based on feelings of social security" (33, p. 3). Its measurement and prediction were derived from the social adjustment scores made on the California Test of Personality.

Limitations of the Study

This study was limited to the application of certain selected aspects of self-concept as defined above. It was further limited to the relatedness of these aspects of self-concept to reading comprehension, reading vocabulary, and total reading skills of the subjects studied. It has not been the primary purpose here to explain the causal factors for any relationships found.

This investigation was confined to a study of an experimental population of seventy-two reasonably normal white boys, who had been enrolled in grades four, five, six, and seven of a southwestern metropolitan system during the school terms of 1958-1959 or 1959-1960. Pupils with outstanding physical, intellectual, or emotional problems were excluded from the population of this study. A control group consisted of the same number of comparable children who had no serious reading deficiencies.

It was anticipated that the conclusions drawn from the findings of this investigation would be applicable to the subjects examined or to like groups of reading clinic pupils.

Basic Assumptions

A basic assumption which seemed necessary to the identification and clarification of this problem was the somewhat eclectic, synthetic, and integrated point of view that self-psychology does not completely eliminate all principles of mechanistic psychology. It merely emphasizes the internal frame of reference as a most important one to employ in attempting to understand the multitude of behavioral processes, including learning and personality. Such a position did not deny the importance of the tangible, directly observable, and measurable overt behaviors postulated by the peripheralists; it did, however, stress the centralists' feelings, needs, desires, and intentions as major determinants of human behavior (32, p. 695). The self-concepts of personal worth, belonging, freedom, self-reliance, self-concern, and the like were recognized as aspects of this latter category of personality determinants.

This assumption implied that there exists no one perfect theory which has proved completely effective in the accounting for the multiplicities of molar behavior (28, p. 115). Neither was there an argument for a choice

between the dichotomy of mechanistic versus field theories of learning or other human behaviors. "A theory is valid only to the extent that it proves useful in predicting or providing for control of behavior; there is no right or wrong in the matter but only convenience" (28, p. 116). Therefore, no inference was intended that any unified theory is best; no attempt to evaluate the merits or shortcomings of any particular theory was advocated.

Several eclectic theories of personality have been proposed (10; 32, p. 607). Among them were: (a) Gardner Murphy's interdisciplinary bio-social theory (21), (b) Henry A. Murray's personology (22), and (c) Gordon Allport's psychology of the individual (3). Hall and Lindzey (10, pp. 539, 545, and 548) illustrated the self-psychologist's emphasis on purposiveness and self-consciousness of the human organism. Of the seventeen personality theories considered by the authors, only three received low ratings on purpose and self-concept as determinants of behavior. Thirteen were rated high on purpose and eight were rated high on self-concept. Thus, it appeared that the self-concept was a leading factor in many of the contemporary theories of personality. "In one form or another, the self occupies a prominent role in most current personality formulations" (10, p. 545).

A second assumption seemed necessary. The prediction of human behavior can be made from the self-concept. It might be argued that the self-concept reveals how an individual feels but it does not necessarily tell what he will do. Moustakas (19, p. 10) believed that a person's perception of himself determines how he will behave. Rainey (22, p. 209) saw the self as a determinant of behavior. Hopkins (11, p. 10) was of the opinion that, in the prediction of human behavior, the perception of an observer was not as important as the perception of a situation by the observer. Snygg and Combs (29, p. 58) defined the basic human need as the "preservation and enhancement of the phenomenal self." "Most of the ways of behaving which are adopted by organisms are those which are consistent with the concept of self" (27, p. 507). This basic assumption did not claim that an individual will behave as he feels 100 per cent of the time; it simply stated that a reasonable and reliable prediction of his behavior can be made from his self-concept.

Plan of the Investigation

After a survey of contemporary professional literature, experimental studies, and published tests, appropriate instruments for measuring mental maturity, reading achievement, and self-concept were selected. Comparable experimental and control groups were matched

by pairs on the basis of sex, chronological age, grade in school, and language factors intelligence quotient. The tests of reading achievement and of self-concept were administered to both the experimental and the control groups. Approximately four calendar months (about seventeen school weeks) of clinical individualized instruction were provided for the experimental group by the reading clinics. Then retests in reading and self-concept were administered to both groups to determine any changes in the reading and self-concept levels.

Descriptive information about the experimental and control groups was collected from: (a) pupils' cumulative records, (b) referrals for individual study, (c) records of psychological examinations, (d) clinicians' and teachers' reports and anecdotal records, and (e) parents' questionnaires on pupils' medical and developmental history. These data were recorded on a descriptive information sheet, studied for indications of similarities and differences of the two groups, and statistically tested for significance of these differences.

Some factors considered were: socio-economic status, step-parents or broken homes, grades repeated or skipped, achievement grade placements, school readiness percentiles, physical defects, nervous symptoms, and behavior problems. Further descriptive data regarding the experimental group's

intelligence, reading achievement, personality, interests, and clinical experiences were gathered, studied, and statistically treated.

The four hypotheses were statistically tested:

- (a) Using initial test data on both groups, Pearson's product moment coefficients of correlation were computed for each of the reading factors with each aspect of self-concept. (b) Using initial test data and Fisher's t technique, the significance of the difference between the means of the two groups was statistically computed for personal, social, and total aspects of self-concept. (c) Using Fisher's t technique, the significance of the amount of change (differences between initial and retest data) in self-concept levels of the experimental and control groups was statistically tested. These computations were for personal, social, and total aspects of self-concept. (d) To relate the amount of change in reading levels to the amount of change in self-concept levels of the experimental group, the difference scores (derived from the scores made on initial and retests of self-concept) were correlated with the differences in reading grade placement deviations from actual grade placements (taken from initial and retests of reading achievement). Pearson's product moment coefficients of correlation were computed for the same aspects of self-concept and of

reading that were used in the testing of the first hypothesis.

Conclusions and recommendations were based upon the statistical findings of the study.

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CHAPTER II

UNDERLYING THEORY OF PERSONALITY AND READING

Some Contemporary Theories of Personality

Since the development of psychology from experimental physiology and philosophy in the latter part of the nineteenth century, personality theory has played a dissident and functional part (17, p. 4). Personality, as the reflection of individuality, has been interpreted in various ways (96, p. 594). Personality theory has been influenced by several rather recent approaches: (a) the traditional clinical observation of Charcot, Janet, Freud, Jung, and McDougall; (b) the Gestalt point of view of William Stern; (c) the impact of experimental psychology; (d) psychometrics; (e) social anthropology; and the like (28, p. 2). Personality has been defined in terms of (a) typal systems, (b) developmental-descriptive concepts, (c) dominating purposes, (d) psychological needs, (e) psychological traits, and (f) "consistent complex of self-regarding attitudes or ego structures" (96, p. 594). The several contemporary theories of personality have stressed, to a greater or lesser degree, various determinants of behavior: (a) purpose, (b) unconscious aspects,

(c) reward or reinforcement, (d) association, (e) hereditary factors, (f) early events in life, (g) holistic and organismic properties, (h) psychological environment, (i) group membership, and (j) self-concept (28, pp. 21-27 and 539-547). The study of personality has followed rather distinct schools of thought: (a) the peripheralists, who are concerned with the directly observable behavior patterns and tangible, measurable attitudes and traits, and (b) the centralists, who are concerned with the underlying covert constructs of feelings and desires (96, p. 596).

As was previously stated in the introduction, it was not the purpose of this investigation to advocate any particular theory of personality; however, those principles concerning a consistent view of the concepts of the self were stressed. Although both points of view have been recognized, the centralists' approach to the study of personality has been favored over the peripheralists' point of view. Concern has been given to feelings and desires as well as to overt behaviors. Emphasis was placed on the importance of purpose, self-concept, holistic and field properties, and organismic principles; yet, attempts were made to maintain an interdisciplinary and integrated balance of the importance of: (a) biology and social science; (b) heredity, early developmental experiences,

psychological environment, and group membership determinants of behavior; and (c) multiplicity of motives.

No attempt has been made in this study to conduct an exhaustive survey of theoretical description and historical background of the self-concept and its relation to reading. However, it seemed appropriate to cite some rather typical expressions of some of the professionally recognized contemporary writers in this area of educational psychology.

Some Self-concept Theories

Historical Background of the Concept of the Self

Considerable study and experimentation have been given to the aspects of personality and temperament by psychologists and educators (20, pp. 126-263; 26, pp. 189-197). Attempts have been made to reduce personality to its major aspects, determinants, traits, levels, or basic parts (28, pp. 1-27; 96, p. 594). Yet, the measurement of personality still remains a difficult matter and much is to be learned about personality determinants, the interrelatedness of personality aspects, and the relationship of personality to the learning process.

For several centuries, people have been intrigued with the human capacity to observe and judge oneself as a major determinant of behavior (20, p. 230). Within the past quarter of a century, the concept of the self has emerged

from a mystic process (59, pp. 64-65). Scientific psychology has tended to view the self as a pragmatic construct rather than as some psychic entity, such as a soul, mind, will, ego, or self. A considerable amount has been written on the subject by psychoanalysts, field psychologists, and social psychologists; yet, there seems to be no complete agreement among contemporary writers in this field as to the definition and description of the ego or self. Various meanings attached to these terms have led to some confusion in psychology. Perhaps much of the difficulty lies in the semantics involved (98, p. 9).

The psychoanalysts, Freud, Adler, Jung, and others, have employed an ego or self throughout the history of their school of psychology. E. B. Titchener, William McDougal, William James (38), and G. Stanley Hall "posited a self or ego as a conception without which psychology just wouldn't make sense" (79, p. 11). G. H. Mead, C. H. Cooley, and W. Sterne helped to keep the self-concept from disappearing completely from the psychological literature when behaviorism dominated psychological thought. John Watson and others considered the self and its soulful antecedents unnecessary to explain human behavior; his objective science of animal behavior found the self a "mentalistic concept too subjective for scientific consideration" (12, p. 113). The philosophy of John Dewey

contained the self-concept as an important influence on the educational trends of the twenties (12, p. 112). Since 1930, the self-concept has gained considerable prominence in psychological thought. G. W. Allport's book, Personality: A Psychological Interpretation, helped to revive the importance of the self. Much of the credit for the focusing of attention on the concept of the self must be given to K. Koffka, K. Lewin, M. Sherif, and H. Cantril (12, p. 113).

Several kinds of selves have been postulated:

(a) physical self, (b) ideal self, (c) pure ego, (d) empirical self, and the like (28, 38). Elizabeth Amen has pointed out the weaknesses of three suggested selves of scientific, sensational, and self psychology (4, pp. 1-13). No one description of the self seemed to be complete and all inclusive. In his recent book, The Self: Explorations in Personal Growth, Clark Moustakas has collected excerpts from the writings of several self psychologists in an attempt to gain a more unified conception of this personal self, man's intrinsic nature and key to "human joy, happiness, and fulfillment" (59).

Some Definitions and Descriptions of the Self-concept

The self of modern psychology has been given at least two definite meanings: (a) the self as an object and

(b) the self as a process (28, p. 468). The former denotes what an individual considers himself to be and includes his perceptions, feelings, attitudes, and evaluations of himself. The latter definition regards the self as a doer and is made up of a group of psychological processes (thinking, remembering, perceiving) which govern behavior. There is no general agreement among psychologists as to the meanings given to the terms "self" and "ego." Some writers have employed one of these to mean the self-as-an-object and the other to refer to the self-as-a-process; others preferred to use these terms interchangeably, denoting the self as both an object and doer (28, p. 468). Whether the self is considered to be an object or process, in modern psychology it is not a metaphysical concept or soul but is regarded as a psychological process governed by causality principles (28, p. 468).

The Freudian ego was considered to be the primary determinant of behavior, since it chose the environmental aspects to which it would respond and determined the instincts which would be satisfied (28, p. 34). To accomplish these functions, the ego had to attempt to integrate any conflicting demands of the outside world, the id, and the superego (28, p. 34).

The basic concept of Carl Jung's analytic psychology of total unity was the self or totality of the psyche (41,

p. 96). The ego was the conscious mind; the self held together the other systems and made provisions for unity, stability, and balance of personality (28, p. 85; 41, p. 96). The goal of life was thought to be the self, which is seldom attained (28, p. 86).

The neo-Freudians disagreed with Freud's emphasis on the biological determinants of behavior; they believed that personality traits are developed in the individual as a member of society instead of resulting from an imitative process (20, pp. 257-259).

Alfred Adler postulated a creative self which did more than just release tension; it was a personalized system which interpreted and gave meaning to the individual's experiences (1, p. 5; 2; 28, p. 117). Consciousness was the core of Adler's psychology of personality; he considered man to be capable of planning his self-realizing behavior (28, p. 118). The creative self of Adler provided life its meaning; it was both the goal and the means to attain the end (28, pp. 124-125). Adler firmly believed that the individual relates himself to the outside world according to his own interpretation of himself (1, p. 5).

Erich Fromm's theory of personality stressed feelings of self-awareness, self-creativity, belongingness, and personal identity (24; 28, pp. 128-129; 59, pp. 64-65). According to Fromm, man adjusts to social demands by making

a compromise between his inner needs and the external conditions (28, p. 129) as he attempts to meet his economic necessities (20, p. 258).

The self has been described by Karen Horney as the individual's central core and source of growth (34, p. 8); it constituted the basis for values and goals in life (59, p. 220). She classified her ten basic needs of man under three headings: love, independence, and power. Horney felt that human conflicts can be resolved by integrating these needs; she designated some of the destructive and unhealthy effects which come from an idealized self as: (a) self-contempt, (b) search for glory, (c) over-dependency on others, (d) self-abasement, and the like (28, p. 134). The maintenance of the real or true self was deemed to be the most consistent value a person experiences.

Harry Stack Sullivan's dynamism of the self or self-system protected man from anxiety; self-esteem was protected from criticism (28, pp. 138-139). The self-system was considered to be the result of the irrational social factors and often interfered with a person's ability to get along favorably with other members of society (28, p. 139; 90, p. 190). It was derived from the interpersonal aspects of a person's environment to avoid anxiety (90, p. 190).

The social-interactional theory of self emerged from the efforts of Baldwin, Cooley, Dewey, G. H. Mead, and others. It has been pointed out that all these men cannot be considered as forming one school of thought. Some of them emphasized the social interaction in the formation of and operation of the self while others stressed the particular social situation to which the individual is continually reacting (103, p. 295). The formation of personality was considered to be largely the result of the dynamic socio-cultural aspects of the environment. The importance of cultural training during the early years of life, in the formation of ideas, habits, attitudes, and values, was stressed by this group (56, p. 135; 103, p. 295). The individual is molded by social expectations which lead to social roles; his self-concept is formed as he perceives what other people expect of him (20, pp. 251-252). This self-concept has been defined as the person seen by himself in a "socially determined frame of reference" (20, p. 252; 61).

George H. Mead's self-as-an-object of awareness, rather than a self-as-a-process, was thought to be acquired from a no-self in a social situation (28, p. 474; 56, pp. 136-140). An individual may possess several selves, such as: (a) family self, (b) school self, (c) business self, (d) church self (28, p. 474).

The ego of Sherif and Cantril was defined as a constellation of attitudes pertaining to what a person values, identifies with, and thinks of himself (28, p. 471; 81, p. 4); these attitudes are related to the "I" and "my" experiences (81, p. 4). They asserted that the ego is a self-as-object; yet, by implication it is a self-as-process since it motivates behavior (28, p. 471). These writers strongly believed that a person's ego is essentially composed of the personal and social values that he accepts (81, p. 151).

P. M. Symonds defined the ego as thinking and perceiving processes which develop and execute plans of action for satisfying inner drives (28, p. 469; 92, p. 4). The self referred to the processes as they were observed and reacted to by the individual (92, p. 4). The manner in which a person perceives, thinks of, values, enhances, or defends himself constituted Symond's self-concept (28, p. 469).

Hubert Bonner explained that the self-image is derived from a person's perceived attitudes that others have for him. He thought that self-evaluation is influenced by the attitudes of other people around us; self-esteem is one's reaction toward the opinions of other people for the individual (12, p. 121). Self-image, self-esteem, and

self-perception influence personality and behavior; feelings of belongingness give self-acceptance and security.

Symonds and Bonner explained how the self-concept is not present at birth but develops gradually and modifies with experience as the individual differentiates himself from others in social interaction (12, p. 115; 92, p. 62). Bonner pointed out that, in this age of competition, the need to compare one's self with others is almost compulsive (12, p. 140). This leads to a person's setting of his goals or values to be attained. His level of aspiration influences his self-concept; the self is constantly reconstructed according to the level of success one must achieve. This enables the individual to receive some reward in the form of recognition from others and keeps the self-esteem intact. An unrealistic level of aspiration often leads to failure, poor adjustment, and submissive attitudes (35, p. 468). A poor reader may become somewhat frustrated and emotionally disturbed when called upon to read orally in the presence of pupils who are good readers.

It has been suggested that the individual may possess more than one self (38, p. 292; 79, p. 12). He may even have a self-concept for each of the social roles he plays, e. g., athlete, party-goer, pupil, sibling, son or daughter, clothes-wearer, pet-lover, Sunday school goer, speech maker, artist, musician, play actor, club officer

or member, hobbyist, and the like (20, pp. 251-257; 64, p. 229). This seems closely related to the self categories suggested by Jersild (39, pp. 135-141).

Hedge Lundholm differentiated between a subjective self and an objective self; the former was believed to be composed of words or other symbols, which enable the individual to apprehend himself. The latter consisted of those symbols which make possible an individual's self-description as perceived by other people (28, pp. 470-471; 49, p. 125).

T. R. Sarbin considered the self to be composed of several empirical selves: somatic self, receptor-effector self, and social self. They were believed to develop in the sequence given above (28, pp. 471-472; 79). He used the terms ego and self interchangeably. Sarbin hypothesized that the social self, as a cognitive structure, is absent or poorly developed in delinquent boys (79, p. 20).

E. R. Hilgard's inferred self-image was derived from nonintrospective methods, such as projective techniques, which eliminate the possibilities of distortion of the true self by conscious factors alone (28, p. 473; 31, p. 375). He defended the thesis that all mechanisms of human adjustment imply self-reference and are understandable when the self-concept is employed.

William Stephenson believed that a person's self-concept can be derived from his self-referrent statements

(28, p. 473; 85, p. 242). His Q-methodology has been widely used for studying quantitatively self-reflections.

Isodor Chein attempted to resolve the ego-self conflict. He thought of the self as the content of awareness and the ego as the motivational cognitive structure built up around the self (16, p. 306; 28, p. 473).

Raymond Cattell proposed a complex factor theory of traits, but he added his differentiated concept of the real self (as one would have to admit himself to be) and the derived self or ego sentiment (28, p. 404).

Organismic theory assumes that one sovereign drive motivates human behavior. Kurt Goldstein's self-actualization or self-realization was such a motive, which drives the individual to strive continuously to realize his inherent potentialities (27; 28, p. 298). Unity and direction of a person's life were provided by this singleness of purpose. Other so-called drives, like sex or hunger, were considered to be mere manifestations of this master motive (28, p. 304). According to Goldstein, the individual will strive to avoid failure and maintain his self-confidence to the extent that he may not even try whenever there is a possibility of failure (28, p. 309).

Andras Angyal described personality as a two-directional activity: self-determination and self-surrender (6, pp. 118, 181). The first pertained

to the attitude toward the individual's inner world and the latter dealt with the greater whole, of which he is a part (6; 59, p. 49). These two orientations complemented each other rather than conflicted. It is only in abnormal behavior that one or the other is partly destroyed or eliminated. Angyal defined his symbolic self as the sum total of one's conceptions of himself; however, he warned that this symbolic self is not always a true picture of reality (28, p. 319). He referred to the ego as the psychological self (6, p. 120).

Abraham Maslow contended that man's inborn nature is essentially good (28, p. 326; 55). He has arranged the needs of the individual in hierarchical order from the most potent to the least potent: (a) hunger and thirst, (b) safety, (c) belongingness and love, (d) esteem, (e) self-actualization, (f) cognitive, and (g) aesthetic needs (28, p. 326).

Prescott Lecky defined self-concept as the unity and totality of one's personality. He conceived the idea of self-consistency as the basic unity or core of personality (47, p. 1). The primary concern of the individual is to self-consistency or organized wholeness (28, p. 328). Experiences which do not fit into the values of a person are resisted and those that do fit are assimilated (28, p. 328). Lecky felt that a person has the problem of

maintaining inner harmony with himself and with his environment, especially his social environment (47, p. 91).

Snygg and Combs contended that the phenomenological approach and internal frame of reference are the correct ones to employ in the study of personality (82, pp. 6-9). The individual should be observed from his own frame of reference as he experiences his phenomenal field at the moment. The phenomenal self-concept includes those aspects of the phenomenal field which have been differentiated into fairly stable and definite self characteristics by the person himself. This is an abstraction of the phenomenal self, which is both self-as-object and self-as-process, because it consists of self-experiences and the phenomenal field determines all behavior (28, p. 470; 81, p. 15). A person's one basic need is to maintain and enhance his own phenomenal self (82, p. 58). Combs stated that the most important ideas an individual ever has are those he holds about himself (18, pp. 22-23).

L. Thomas Hopkins conceived the emerging self as the central unitary characteristic of personality. Hopkins' self was defined as the awareness of being, with all the meanings related to it. It was what the person thought himself to be--the real, intimate self (33, p. 320).

Carl Rogers gave a very complete description of the self, the perceived "I" with the values attached to it as

differentiated from the entire perceived field (74, pp. 497-498). He attempted to organize and list some propositions to serve as bases for the explanation of human personality and behavior (74, pp. 483-524). Rogers' theory of personality was a blended synthesis of holistic and organismic, phenomenological, interpersonal, and self theories (28, p. 478).

Clark Moustakas summarized some principles basic to the recognition and understanding of the self:

The individual knows himself better than anyone else.

Only the individual himself can develop his potentialities.

The individual's perception of his own feelings, attitudes, and ideas is more valid than any outside diagnosis.

Behavior can be understood from the individual's own point of view.

The individual responds in such ways as to be consistent with himself.

The individual's perception of himself determines how he will behave.

Objects have no meaning in themselves. Individuals give meaning and reality to them. These meanings reflect the individual's background.

Every individual is logical in the context of his own personal experience. His point of view may seem illogical to others when he is not understood.

As long as the individual accepts himself, he will continue to grow and develop his potentialities. When he does not accept himself, much of his energies will be used to defend rather than to explore and actualize himself.

Every individual wants to grow toward self-fulfillment.

Every individual learns significantly only those things which are involved in the maintenance of the self. No one can force the individual to permanent or creative learning. He will only learn if he wills to. Any other type of learning is temporary and

inconsistent with the self and will disappear as soon as threat is removed.

Concepts, ideas, symbols, and events can be denied or distorted but experience is experienced in the unique reality of the individual person and cannot be untrue to itself. . . .

We cannot teach another person directly and we cannot facilitate real learning in the sense of making it easier. . . . The learning process is a unique individualistic experience. . . .

Under threat the self is less open to spontaneous expression, *i. e.*, more passive and controlled. When free from threat the self is more open, *i. e.*, free to be and to strive for actualization (59, pp. 9-11).

Abstract statements like ideal-self, inferred-self, and the like are viewed by Moustakas as mere categories which do not aid in better understanding of the self. The self cannot be defined; it must be experienced since it is the individual's totality (59, p. 11).

The self has been defined as: (a) thoughts, feelings, attitudes, ideas, and values which constitute an individual's consciousness of his existence (39, p. 9); (b) "sum total of all he can call his" (38, p. 291); (c) total of one's experiences (84, p. 18); (d) the *proprium* or self, which includes bodily sense, self-identity, self-esteem, self-extension, rational thinking, self-image, appropriate striving, and the function of knowing (3; 28, p. 268); (e) the ego-ideal, which is an inspired self or set of personal values or goals to be attained by the individual (28, p. 170; 60); (f) the map a person refers to for self-understanding (68, p. 155).

Several terms have been used by the contemporary psychologists to express some concepts about the self. Some typical ones include the following: aspired self and ideal self (28, p. 170; 29, pp. 215-217; 60), attempts to attain goal of perfection (2, p. 47), creative self (1; 24; 28, pp. 117, 128), emerging self (33), phenomenal warmth (28, p. 269), propiariate striving (3; 28, p. 268), psychological self (6, p. 120), self-acceptance or self-rejection (28, pp. 487, 491; 59, p. 169; 74, p. 139), self-actualization (20, p. 2; 28, pp. 96, 298, 304, 325, 481; 55; 59, p. 4; 74, pp. 487-489), self-awareness (6, p. 117; 24; 28, p. 128), self-confidence and feelings of superiority (2, p. 48; 27; 28, p. 309), self-consciousness and self-criticism (2, p. 42; 4, p. 72; 28, p. 153; 56, p. 255; 90), self-consistency (28, p. 328; 6; 74, pp. 500-509), self-determination (6, p. 37; 28, pp. 198, 320; 60), self-dignity and self-worth (3; 28, p. 125; 82, p. 63), self-esteem and self-aggrandizement (2, p. 85; 3; 20, pp. 266-275; 28, pp. 121, 268), self-expansion (6, p. 29; 28, p. 318), self-experience (4, p. 72), self-extension (3; 28, pp. 268, 276), self-identity (3; 28, p. 268), self-image (3; 28, p. 268; 53, p. 452), self-interest (59, pp. 67-68), self-maintenance and self-enhancement (28, p. 481; 33, pp. 60, 124; 74, p. 501; 82, pp. 58-61), self-realization (27; 28, p. 298; 82, p. 63), self-regard (28,

p. 489; 74, pp. 497-499), self-sentiment (28, p. 404), sense of importance (3; 28, p. 269), and symbolic self (6, p. 120). Lack of space prevents the definitions and descriptions of these terms as they were used by the various contemporary psychologists.

Theoretical Background for Reading Instruction

Some Theories Which Have Influenced the Instruction of Reading

The teaching of reading has been influenced by the various theories of learning which have gained recognition during the past half century. Hilgard has divided these schools of psychology into two major groups: (a) stimulus-response and (b) cognitive (32, p. 8). Pavlov's conditioning, Watson's behaviorism, and Thorndike's connectionism stressed atomistic and mechanistic learning. A given stimulus was claimed to produce a given response, and the value which caused the response was believed to be in the stimulus. Teachers set up situations to get desired responses. The emphasis was on trial-and-error, repetition or drill, and acquisition of habits (32, pp. 9-11). Learning was supposed to be a mechanical process; by repeatedly forcing neural impulses through the neurons, preferred neural pathways (habits) were formed as resistance was broken down at the synapses. Reading instruction was

reduced to the study of parts, words, or letters and their sounds.

Stages through which reading instruction methods have passed have been described by several writers (5, pp. 204-294; 17, pp. 4-17; 89, pp. 13-20; 101, pp. 5-15). The alphabetical-oral method and the phonetic method of reading instruction represented the atomistic school of thought. In the former method, pupils were taught to spell out each new word in its initial learning. All reading was oral; during silent reading periods, the child whispered familiar words and spelled out the new words that he encountered. Clear enunciation was emphasized, and reading and spelling were taught simultaneously. Reading instruction was slow and indirect, and failed to guarantee comprehension. In the phonetic method, children were taught to memorize phonograms, or word families, and to sound out each letter or letter combination within a word and each syllable in larger words. This method enabled the pupil to attack new words and recognize words by their sounds. This was not a satisfactory method of reading instruction since the English language is not fundamentally phonetic and since it developed slow readers (17, pp. 6-7).

Somewhat newer reading instruction methods have developed from the influences of organismic, Gestalt, phenomenistic, and functional schools of thought. Field psychologists claimed that learning is not merely a

mechanical process; a given stimulus does not produce a given response. That which causes the response is not to be found in the stimulus but in the learner himself. Each learner will respond differently because of his different experiences and purposes which give him meaning and value. Emphasis was placed on cognitive, goal-seeking, problem-solving, purposeful, insightful learning (32, pp. 9-11). Behavior was considered molar rather than molecular; the child develops as a whole person.

The look-and-say or sight method of reading instruction emphasized meaning and comprehension of words as they appear in context. The child learned to recognize the Gestalt configuration or visual pattern of the word as it was written on the blackboard by the teacher. She pronounced the word and asked the pupils to repeat it after her. The meaning of the word was further stressed by its use in a sentence and other demonstrations which helped the children to remember it. A disadvantage of this method was that it did not supply the pupil with an adequate method for attacking new words, and the guessing of words sometimes occurred (17, p. 10). The phrase-reading method was an extension of the look-and-say method and attempted to teach whole phrases or short sentences as Gestalts (17, pp. 12-14). Often the recognition of a word occurred only when it appeared in the particular phrase in which it was

learned. Individual words were not seen clearly. The poor reader made little progress with this reading method, since he could perceive only one word or less at a time (17, pp. 13-14).

The sentence-story method was the last one to be introduced. It presented meaningful, whole thought units and proceeded to the smaller parts, thus making first reading experiences interesting to the pupil (89, p. 15). The discovery of individual words was left to the process of individuation or the process of analysis (5, p. 241).

There seems to be no one best method for the teaching of reading. No one method should be used exclusively; a combination of methods to fit the individual's needs appears to be the most effective (5, pp. 258-294; 89, pp. 16-19). Some methods are more effective with some pupils than are others; a good teacher will keep the best features of all methods (89, pp. 258-294; 17, p. 17).

It appears that certain theories of behavior and learning are inadequate because each stresses certain features of behavior, such as learning or personality, to the exclusion of other features (32, p. 326). Attempts have been made to integrate the common elements of these theories into a patterned eclecticism which endeavors to provide an orderly, yet flexible, framework (32, p. 457; 98, p. 437). Thorpe and Schmuller (98, pp. 387-435) have

discussed several attempts to integrate learning theories by Dashiell (19), Kellogg (42), McConnell (51), Hilgard (32), Spence (83), and Leeper (48). These eclectic points of view stressed some common principles of learning concerned with the importance of goals, levels of maturation, experience, emotions, instruction, cognition, and the like (98, pp. 438-443). "Learning should be considered from an eclectic point of view" (98, p. 437).

A basic assumption of this study was the somewhat eclectic, synthetic, and integrated point of view that self psychology does not eliminate all principles of mechanistic psychology; it merely emphasizes the internal frame of reference and one sovereign motive of self-realization advocated by organismic, Gestalt, and phenomenistic schools of psychology. Individual human behavior, then, is not merely a mechanistic response to external stimuli; the behavior's purposive self, emerging from his phenomenal field, provides meaning to the interrelated aspects of his total personality. Personality can no longer be adequately expressed in terms of atomistic traits; perhaps the term "dimension" might better describe the degree along the continuum for any behavioral aspect. Dichotomies of honesty versus dishonesty, good versus bad, friendly versus unfriendly, likeable versus unlikeable, self-confident versus unconfident, and the like do not seem entirely

appropriate for personality characteristics. Such terms are probably used only because they provide pragmatic semantical values, not because trait dichotomies actually exist. This seems in agreement with John Dewey's opposition to dualities, *i. e.*, knowledge versus doing, emotion versus intellect, mind versus body, freedom versus authority, and the like (66, p. 5). Learning is acquired in a meaningful whole rather than in a piecemeal fashion; behavior is as an organized whole rather than as a series of atomistic parts. Mind and body are not separate entities. Psychosomatic medicine has clearly brought this to our awareness. Learning and personality cannot be separated.

Personality and Reading

During the past quarter century the professional literature of education and psychology has devoted considerable space to the relationship of reading and personality. Research indicates that these two are related but the extent and nature of this relationship is not clearly understood. Beulah Ephron believed that personality factors enter into every reading problem case, since reading achievement is part of the total development of the individual (21, p. ix). Helen Robinson has pointed out that some writers believe reading disability to be a

symptom of personality maladjustment while other writers contend that reading failure has detrimental effects on personality (72, p. 87).

Robinson further explained that this controversy was due to the various concepts of reading and to (a) the divergent theories, which placed different emphasis on the relationship of personality and reading, and (b) the different instruments used to measure personality (72, p. 98). She referred to three major theories of Allport, Murray, and Lewin, which were described by Saul Rosenzweig (72, p. 88; 76, pp. 249, 255; 96, p. 595). Allport utilized tests of traits which involved judgments of judges to measure them. Psychoanalytically oriented Murray stressed biological adaptation and explored the unconscious with free association, dream analysis, and apperceptive tests of fantasy. Lewin advocated the Gestalt theory of personality and set up controlled experiments to measure it (72, pp. 87-88).

Three major theories of learning have emphasized different relationships of personality and reading:

. . . . The Connectionists, such as Thorndike and his followers, contend that learning takes place when the stimulus and response connection increases in strength. This theory implies that one learns to read by repetition or drill. Teachers of reading recognize that varying amounts of repetition are required in the classroom.

The Gestaltists . . . emphasize the dominance and background of an experience, with motive and drive as essential elements in learning. Reading teachers

recognize the importance of motivation, as well as the problems involved in teaching students to reconstruct the writer's Gestalt for complete understanding of his message. Followers of this theory are concerned with perception in its broadest sense.

Those who believe in the purposive theory of learning emphasize the end result, including the goal or need, which is usually set up by the environmental conditions. The goal is dominant and the means of attaining it are secondary. Hence, it is essential to determine whether the acquisition of reading skills is consistent with each learner's goals and needs. Proponents of this learning theory would be more concerned with personality as it relates to reading than would the other groups (72, p. 89).

Different theories of learning and personality have led investigators to use different kinds of evaluating instruments. Consequently, their findings and interpretations of results have been controversial and inconclusive.

David Russell pointed out that tests of personality, like the California Test of Personality, are valuable instruments to aid the teacher in gaining insight into the reading and personality problems of her pupils (77, p. 379). After such tests reveal a pupil's difficulties along certain lines of self-adjustment and social adjustment, the teacher may plan reading experiences designed to help the child in these weaknesses. Paul McKee has explained how the development of attitudes, understandings, and skills in reading independently leads to personal achievement, self-reliance, and inner security (52, p. 20). Poor reading ability is magnified and advertised by oral reading in front of the peer group. The self-concept level seems to

be lowered by the inability to attack and pronounce new words, and the pupil forms an image of himself as a poor reader (53, p. 14).

It would seem logical that psychological conditions are conducive to the teaching of reading and that reading achievement and personality adjustment are related.

Some Methods and Techniques of Remedial Reading Instruction

There was a time when remedial-reading instructors were largely interested in making an individual diagnosis of the pupil to determine his physical defects and faults in the mechanics of the reading process. To eliminate the impediments which prevented the child from learning to read efficiently, drills and mechanical devices were utilized to reduce reading errors (58, p. 111). Gestalt, organismic, and purposive psychology have caused reading instruction to emphasize comprehension--and, to a lesser degree, speed. Even though it would probably be difficult to find any modern reading teacher who failed to introduce the phonetic elements in reading, schools have been criticized for not stressing word attack skills. Some writers have advocated a return to atomistic teaching by phonetic methods alone (9, 23, 95). They accused the supporting experimental studies of look-and-say, phrase-reading, and sentence-story methods as being fallacies. Projects, reading readiness,

experience charts, Gestalt configurations with emphasis on meaning, visual clues in context, concern for individual differences and for the child as a unique person, differentiation of parts from wholes, and the like would be discarded for extreme emphasis on phonics for everyone. "Except in a small fraction of cases, it is not a matter of intelligence, of physiological defects, or of psychological disturbances. It is purely a question of teaching method" (89, p. 36).

Many of the pupils who have been referred to reading clinics needed help in associating sounds with symbols. In the St. Louis reading clinic, over half of the pupils had difficulty with word perception skills (89, p. 318).

Recently some educators and textbook writers have taken a closer look at the newer methods of reading instruction and have advocated more emphasis and earlier introduction of phonetics (52, pp. 5-20). Yet, the trend is not to sacrifice meaning for the slow, laborious process of phonetic analysis of each letter and word; a balanced reading program has been advocated by many leading reading specialists (5, 10, 17, 77, 89, 101).

McKee has emphasized this balanced program and its effects on the child's personality:

Through a definite, systematic, and sequentially-developed program in equipping pupils to identify strange words and to cope with meaning and with

difficulties independently, the child can be helped to build the self-confidence and sense of achievement which is essential to his possession of a feeling of personal well-being and to his continuous subsequent accomplishment . . . the method of teaching used can broaden the scope of the child's interests and widen his horizons. . . . The reading selections can impart moral values by portraying characters and events that are real and convincing to the child and offering him stories that have high interest appeal. . . . The general methods of teaching can be such that the child has ample opportunities to grow personally and socially. Group discussions and numerous other ways in which pupils are led to work together help the child to develop feelings of belonging and of being important to others. . . . First, he must recognize familiar words and identify strange words which appear in the material he is trying to read. . . . Second, he must arrive at the writer's intended meaning . . . the power to read independently gives the pupil a sense of self-reliance, personal achievement, and inner security (52, pp. 11-20).

Reading clinic remedial methods have attempted to keep pace with the changing trends influenced by theories of psychology, experimental studies, and evidences found in reading failures. A balanced program has usually been practiced in most clinics; care has been taken not to "throw out the baby with the bath" in preserving the best parts of older techniques and methods and incorporating them with the newer ones.

Each retarded reader has been considered to be unique, and efforts are made to meet his intellectual, emotional, and reading needs (87, p. 296). A common procedure used by reading clinics is to admit the child with reading problems after his personality, reading, and intelligence tests results and other pertinent data have been studied by a

staff of qualified persons. A case study is begun by this group of educational, medical, psychological, and reading experts as the interpretation and synthesis of all available information is considered. A tentative hypothesis is formulated to serve as a guide for the child's initial treatment. Physical, intellectual, and emotional handicaps are eliminated, and, if the case seems to be largely one of reading difficulty, the child is admitted to the reading clinic.

Before undertaking remedial-reading instruction, the reading clinician usually makes a thorough analysis of the child's disabilities from such data as (a) reading index and educational profile, (b) tests of various discriminations involved in reading, (c) profile of errors, and (d) social, physical, psychological, and psychiatric data which have been recorded on the pupil's clinical record (58, p. 111). Some other information needed by the reading clinician may include that derived from (a) interviews with teachers, parents, and principals; (b) oral and silent reading tests for diagnostic purposes; (c) photographic records of eye movements; and (d) tests for mixed dominance and reversals (89, pp. 315-319).

Each child is given the individual help he needs to help eliminate his particular difficulties. This includes both mechanics in reading and assistance in personality

development. Some students, who have failed to read by phonetic and look-and-say techniques of the classroom, receive valuable assistance through Grace Fernald's kinesthetic or tracing method (22). Certain kinesthetic learners receive skills in word recognition and gain self-confidence through mastering a larger vocabulary and making more rapid progress in reading (89, p. 319).

The flashmeter, metronoscope, and other mechanical devices are often used to train poor readers in reading alertness and to stimulate them in their rapid associations between word and phrase perceptions and the corresponding meanings; reading speed and recognition span are thus increased (89, p. 319).

Reading materials of high interest and low vocabulary level are selected by the pupil to fit his needs and abilities. An interest inventory, like the one devised by William Kottmeyer (44, pp. 53-54), is sometimes utilized. The pupil may be given considerable choice in the selection of his reading materials on his own reading level. Oftentimes he is encouraged to assume initiative in the planning of his reading program and in the keeping of his own reading records, so he will be aware of his progress and needs. Grades, parents' demands and over-expectations, competition in the classroom, criticisms by peers, and other pressures are removed or reduced to a minimum.

The case study considers the whole child as he develops. Anecdotal records, notes on pupils' needs and progress, information secured from conferences with teachers and parents, and the like are preserved and studied. Case study techniques for retarded readers have been described and illustrated by Witty (101, pp. 225-248) and Strang and Bracken (89, pp. 289-340).

While some reading clinics would stress the more atomistic training in the mechanics of reading, others would emphasize the removal of personal and emotional handicaps. Beulah Ephron leans toward the psychoanalytical approach to the remedial-reading program:

People who come to the reading center are asking for help. They believe that tutoring in reading is the kind of help they need. To give them only tutoring in reading is to add nothing to their own diagnosis. It is the responsibility of the reading center to consider the total person and not just the reading performance. It is the responsibility of the reading staff to be aware of the linkages between reading difficulties and personality problems.

Though the presence of a reading problem suggests the presence of emotional conflicts, the absence of a reading problem does not indicate the absence of emotional conflicts. . . . It is necessary to consider the total person . . . in every school situation (21, p. 282).

However, only 6 per cent of the cases referred to the St. Louis reading clinics were diagnosed as cases of emotional difficulties severe enough to handicap them seriously in reading (89, p. 318). Other clinics have found a greater number of their reading clinic pupils with

the more serious personality conflicts. Monroe has explained that reading problems are often the result of many factors over which the child may have little control (58, p. 116). Both the proper emphasis on the mechanics of reading and the case study consideration for the whole child are often prescribed for the poor reader (58, 116-177). This seems to suggest a remedial-reading program in a non-threatening therapeutic atmosphere rather than two separate programs: (a) reading and (b) personality adjustment, either given simultaneously or one before the other. It may not be necessary to provide definite personality therapy for reading clinic pupils; appreciation of total personality seems to be very beneficial (25, p. 140).

Some Related Experimental Studies

Some Related Studies of Personality and Reading

Studies of the relationships of reading and personality have been reviewed by several writers. Several case studies seemed to confirm the conclusion that personality problems are related to reading difficulties (102, p. 282). David Russell concluded that the relationships vary from small to significant correlations (78). Paul Witty found that emotional difficulties appeared more frequently in retarded readers (102).

Charles Reed concluded that personalities (as measured by the California Test of Personality) of sixty-four sixth-grade children correlated .41.079 with their reading levels (15, p. 13; 69).

Sister Niess, in her investigation of certain physiological, emotional, and motivating factors associated with 2,000 fourth- through seventh-grade remedial-reading pupils, applied the "t" technique statistic to California Test of Personality data and found that the normal readers seemed better adjusted than the problem readers (15, p. 14; 62). After fourteen months of remedial instruction, retest data yielded information which led to the conclusion that significant positive changes occurred in the personalities of these pupils. However, it did not appear that these changes could be attributed solely to the training and encouragement received in the remedial program. Most personality maladjustments of her subjects improved when these pupils experienced assurance, confidence, and success in reading ability (62).

Norman and Daley compared the personalities (as measured by the California Test of Personality) of two groups of sixth-grade boys and found the personality adjustment of the two groups to differ significantly in amount but not in pattern (63). One of the groups was operating on one standard deviation above grade level on

the California Achievement Test, and the other group was one standard deviation below grade level. The superior readers made significantly higher scores on all parts of the personality test.

Helen Robinson cited several studies of personality and reading that have been made by various investigators using a variety of instruments for evaluation (72, pp. 90-98). Ladd, using the Haggerty-Olson-Wichman Rating Scale with 350 third- through fifth-grade pupils, found that good readers were slightly superior in self-control, sense of happiness, and achievement feelings (45). She questioned the close relationship of personality adjustment with reading ability (102, p. 283). These subjects were also superior on teachers' ratings of self-confidence, persistence, and concentration. Ladd concluded that personality factors are too complicated and become obscured by generalizations. Jackson utilized teachers' summaries of personality traits based on interviews of 300 advanced and 300 retarded readers (37). He found that there could be expected a better than chance number of readers with reading difficulties and personality traits considered to be below average. His survey seemed to indicate the importance of fears and worries associated with reading difficulties. Preston used parent interviews and concluded, from her study of 100 poor readers and 67 control

group members in grades two through ten, that reading disability led to blighting insecurity and personality maladjustment (67, p. 252). Sylvester and Kent, psychoanalysts, studied thirteen retarded readers between eight and thirteen years of age and concluded that the reading teacher must meet the pupil's emotional needs since the disturbance of the exploratory function was the cause of reading failures. Symptomatic treatment with pedagogical methods is not sufficient (91, p. 76). Gann, making use of the Rorschach Test with thirty-four poor readers and a control group of average readers, found the "poor readers were preoccupied with minute details and were unable to succeed with the practical and abstract" (25, p. 136; 72, pp. 94-95).

A study of the relationship between reading retardation and mental health status of some fifth-grade pupils was conducted by Tabarlet (93). A difference in the means for mental health of the group of average readers and for the group of retarded readers was significant at the .01 level. The difference was in the direction of higher mental health scores for the average readers. One of the conclusions of this study was that, as a group, retarded readers are not as mentally healthy as average readers.

Some other studies of the relationships of reading disability with personality adjustment have been described by Witty (101, pp. 228-230).

Some Related Studies of Self-concept

Some experimental studies of self-concept are noteworthy. Thelma Reeder, using Brownfain's Scale, made an investigation to determine the relationship of self-concept of the middle-grade pupil (a) to his peer status, (b) to his behavioral manifestations, and (c) to his achievement in academic situations (71). One of her conclusions was that children with low self-concept achieve less in comparison with their potential.

Donald Taylor utilized the Q-technique and his intercorrelations of self and ideal-self led to these and other conclusions: (a) Self-concept remains relatively stable up to seven and one half minutes. (b) Self-concept is not altered significantly by external environment. (c) Paper-and-pencil tests of self-concept obtain about the same results as do the card-sorting variety (94). The reliability of any instrument used to measure and predict self-concept will depend upon a relatively stable self-concept of each subject.

Hugh V. Perkins, in his Q-sort study of teachers' and peers' perceptions of 251 elementary school children's self-concepts, reported these findings:

(a) The self-concepts and ideal selves of children become increasingly and significantly congruent through time. (b) The self-ideal self congruencies of girls are significantly greater than those of boys. (c) Sixth grade children and children whose teachers have completed child study show significantly greater self-ideal self congruency than do children, respectively, in fourth grade and those whose teachers have never participated in this child study program. (d) There is little or no relationship between changes in self-ideal self congruency and changes in school achievement and changes in their acceptance by their peers (64, p. 230).

Some Methods of Self-evaluation

Some empirical approaches to the study of personality from the external frame of reference include Rorschach, Thematic Apperception Test, Bell Adjustment Inventory, Minnesota Multiphasic, Kent-Rosanoff Word Association Test, and others (28, p. 496). These instruments attempt to measure feelings and attitudes closely related to those considered to be concepts of the self. Another example of a projective technique is the Wishing Well, which was produced to measure emotional needs and self feelings of belonging, achievement, economic security, fears, love and affection, guilt, sharing, world outlook, and the like (69). Two clinical projective tests which are designed for exploring disturbances of the body image aspects of self-concept are (a) Karen Machover's Draw-a-person (50) and (b) J. N. Buck's House-tree-person (14) tests (20, pp. 237-239). Self-portraits are not usually attempted in these

drawings but the self-concepts of the subjects strongly influence the natures and features of the persons drawn.

Carl Rogers and his associates have made use of electrical recordings of therapy sessions by extracting self-reference verbalizations of the client's self-picture to show changes which occur from time to time (28, p. 490). Dorothy Stock found a correlation of .66 between a person's self-concept and his conceptions of others (86, p. 180).

William Stephenson's Q-technique for testing hypotheses (85) was used by Rogers and his co-workers. Perkins used the Q-sort to determine the differences between the subject's self-concept and his ideal self (65). The self-referent statements he used were derived from categories set up by Arthur T. Jersild (39), who formulated statements from children's descriptions of what they liked and disliked about themselves (39, pp. 22-24). Such self-referent statements have been obtained from other self-descriptions, personality inventories and tests, therapeutic protocols, and the like (28, p. 497).

Jersild's categories of self were in regard to the following: (a) physical characteristics, (b) clothing, (c) health and physical conditions, (d) material possessions, (e) animals and pets, (f) home and family relations, (g) recreation, (h) special talents and interests, (i) school, (j) intellectual abilities, (k) ability in

sports and play, (l) "just me as I am," (m) personality or character, (n) social relationships and attitudes, (o) religion, (p) independence or self-help, and (q) attitudes toward the world (39, pp. 135-141).

Some paper-and-pencil attempts to measure personality are available. Carl Rogers' Test of Personality Adjustment yields factors of self-concept related to personal inferiority, social inferiority, family relationships, and day dreaming (75). It is appropriate for children between the ages of nine and thirteen; there is a separate test for boys and for girls. Edna Baxter's Test of Child Feelings attempts to measure feelings of friendliness, responsiveness, respect, dependability, self-control, fairness, unselfishness, and the like (8). This test may be administered as either an individual test or a group test and is geared for children in grades one through eight.

The elementary level of the California Test of Personality is designed for children in grades four through nine. It "is organized around the concept of life adjustment as a balance between personal and social adjustment. Personal adjustment is assumed to be based on feelings of personal security and social adjustment on feelings of social security" (97, p. 3). This test attempts to measure feelings of self-reliance, personal worth, personal freedom, belonging, freedom from withdrawing tendencies,

freedom from nervous symptoms, social standards, social skills, freedom from antisocial tendencies, family relations, school relations, and community relations. These latter aspects of self seem to be closely related to social roles played as a member of the family, peer group, school, and community. The two major parts of the test, personal and social adjustment, seem to be in harmony with some goals of all education: (a) to develop the individual to his fullest potential and (b) to pass on cultural heritage and make the person a social being.

The School and the Self-concept

It has been said that the self-concepts that a person has are very important; all behavior is affected by them (40, p. 3). School success depends to a large extent upon what the pupil believes about himself (40, p. 3). Jersild felt that the child has more capacity for understanding himself than he receives credit for from educators (39, p. vii). Rogers stated that each individual has within himself the capacity to deal constructively with his own problems, once they have come into conscious awareness (73, p. 4; 74, p. 24).

The school can assist the child in making a most important discovery, the discovery of himself (39, p. vii). From babyhood, the child forms opinions and feelings about

himself and others; this continues through life (53, p. 435; 87, pp. 85-99). He must have realistic attitudes about himself; he must think of himself as being loved, capable, worthy, and a respected member of his groups at home and at school. The school can help the home, church, and community to resolve children's problems, thwartings, anxieties, guilt and inferiority feelings, defensive attitudes, and other forms of self-distrust and self-defense (39, p. 5). School success depends in a very large measure upon the kinds of self-concepts formed by the pupil (18, p. 22).

Eleanor Johnson listed several ways in which the teacher can help build good self-concepts in her pupils: (a) friendship; (b) accepting atmosphere; (c) individual recognition in his particular skill; (d) fair, firm, consistent, and reasonable discipline; (e) understanding and love through games, stories, parties, picnics, and jokes; (f) knowledge of background and living conditions; (g) performing useful tasks and room duties; (h) practicing safety; (i) maintaining neat and orderly desks, rooms, and school; (j) observing health procedures, like washing the hands before meals; (k) caring for personal belongings; (l) performing leadership duties, like running errands and welcoming visitors; and (m) remaining orderly when not being supervised (40, pp. 3-5). The school also makes for

competition which leads to undesirable self-regard in pupils; it can influence the self-appraisals of the children as they compare themselves with the others. Values from the culture are exhibited by the teacher, and these influence the pupils' development of their self-concepts (39, p. 94). The teacher's acceptance of self and of others has a relationship with his insightful perceptions of the self-concepts of the pupils (65, p. 219).

The democratic, purposive, organismic, and psychoanalytic emphases upon the individual's covert feelings have found roots in various educational areas. A few representative examples are as follows: (a) characteristics of teachers (30, p. 9), (b) supervision (99, pp. 27-103), (c) teacher-parent interviews (46, pp. 28-29), (d) child development (36, pp. 101-128), (e) play therapy (7), (f) guidance (54, p. 64), and (g) student-centered and quality teaching (74, pp. 384-428; 100, pp. 49-90).

Self-feelings have been recognized as vital to the educative process; covert feelings, as well as overt behavior, must be considered to be important aspects of the total functioning of a person. Reading and other academic learning seem to be rather closely related to self-concepts (11, pp. 166-169; 53, pp. 14-15). It was hoped that the present study might shed some light on this relationship,

which appears to be so important in the teaching-learning process.

Summary

Personality has been defined in various ways; the self psychologists have stressed the self-regarding attitudes as primary and basic to the study of personality. Psychoanalysts and field and social psychologists have revived interest in the concept of the self. Psychologists have viewed the self as a pragmatic construct, rather than as a mystic entity, for determining human behavior. Several kinds of selves have been postulated; no one description of the self appears to be complete and all inclusive. However, it seems rather clear that the self represents the thoughts and feelings which constitute the individual's conscious perceptions of his existence; it fulfills the one basic need to maintain and enhance these feelings and to give consistent unity and totality to one's personality.

Two schools of thought have influenced reading instruction: (a) stimulus-response and (b) cognitive. Reading methods have passed through several stages: (a) the alphabetical-oral and (b) phonetics methods represent the mechanistic points of view; (c) the look-and-say and (d) phrase and sentence-story methods reflect the field and organismic principles. There seems to be no one best

approach to the teaching of reading; a balanced combination of these methods and techniques, with emphasis on the individual's needs and purposes, appears to be effective.

Contemporary theories of behavior are inadequate to explain the way a child learns to read, since each theory stresses certain features, as learning or personality, to the neglect of others. Attempts to synthesize the best of these theories into an integrated and patterned eclecticism have been made. It is usually agreed that learning is a unified and ordered process; it is a goal-directed reduction of need or purpose. Learning involves both neural processes and reaction to the environment; it requires a balance of physical, mental, and emotional aspects of behavior. Since each child is unique, learning is an individual child-centered process. Learning should be considered from an eclectic, interdisciplinary point of view.

Research shows that personality and reading are related, but the extent and nature of this relationship is not yet clear. Different theories of personality have made use of instruments fitted to their own designs. This has led to controversial and inconclusive interpretations of findings; however, it is fairly well agreed that reading achievement is probably rather closely related to personality adjustment. The success of reading instruction

depends to a large extent on the teacher's empathic understanding of the pupil's feelings and purposes.

Remedial-reading methods also were influenced by the earlier mechanistic schools of psychology. Stress was on the removal of defects and faulty mechanics of reading. Gestalt, organismic, and purposive thinking influenced reading methods to give more emphasis to comprehension, larger configurations, meaning in context, and the like. Schools were criticized for neglecting word attack skills, and a return to phonetic methods was advocated by some persons. A shift to an earlier introduction of, and more emphasis on, phonetics was reintroduced into the reading program by McKee and others.

Many methods and techniques, both mechanistic and cognitive, have been used by reading clinics. Kinesthetic activities, mechanical devices, high-interest and low-vocabulary level materials, removal of pressures, therapeutic conferences, interest inventories, anecdotal records, and the like have supplemented the case study of each pupil.

While some writers have advocated more atomistic training in the mechanics of reading, others have stressed the removal of personality and emotional handicaps. Still others have taken a middle-of-the-road position and have worked with personality and reading problems at the same

time, utilizing an interdisciplinary case study approach to consider the functioning of the whole child. This suggests an integrated balance of remedial techniques and methods in a non-threatening atmosphere, rather than two separate programs of (a) reading and (b) personality training, given separately but either simultaneously or one before the other.

Studies of self-concept reveal that the self seems to be related to peer status, but its proper relation to academic achievement is still being questioned. Agreement in these areas is incomplete and further study is needed.

Several instruments of self-evaluation have been constructed: (a) projective techniques, (b) Q-technique and Q-sorts from self-referrent statements, and (c) paper-and-pencil type tests, scales, and inventories. The California Test of Personality appeared to be an adequate self-concept instrument for the purposes of this study. This test has been used by Hamlon and others to measure feelings of personal worth, reliance, freedom, belonging, social attitudes, and the like. These aspects of personality seemed to be very closely related to the descriptions and categories of self proposed by Jersild, Perkins, and some other contemporary self-psychologists.

It seems to be fairly well established that self-feelings of the pupil are closely related to his chances

for school success. Assistance in the discovery of himself is probably one of the most important contributions the school can make. Educators have recognized the values of the self-feelings in many areas of educational psychology, supervision, guidance, teacher-parent interviews, play therapy, classroom instruction, and the like. The school, in performing its job of developing the whole child, can ill afford to neglect a careful study and application of the self-regarding attitudes of both pupils and teachers. The reading process seems closely linked with self-concepts; a better understanding of this relationship appears appropriate and desirable.

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CHAPTER III

EXPERIMENTAL PROCEDURES

Description of the Subjects

The population of this experimental study consisted of seventy-two white boys who were regularly enrolled in grades four through seven of a southwestern city of over 500,000 population and who were attending one of the system's five reading clinics during the school years of 1958-1959 or 1959-1960. Only boys were selected for this investigation since there were very few girls attending these clinics.

The subjects of this experimental group were considered (a) to be relatively free from physical, intellectual, and emotional handicaps or disturbances, (b) to possess average or better intelligence (individual test intelligence quotient of approximately 100), (c) to be retarded approximately two or more years in reading ability (reading grade placement about two or more years below actual grade placement), and (d) to have failed to respond developmentally from reading instruction of the regular classroom environment. Any physical or emotional defects detected were corrected, and only those pupils whose

problems seemed to be largely of a reading nature were admitted to the reading clinics.

Equating the Experimental and Control Groups

A control group of the same number of boys was formed by matching each experimental group subject with another pupil of the same school system, sex, and grade and of an approximate chronological age and language factors intelligence quotient. Control group members were operating on a reading level of not more than one grade placement below national statistical norms.

The California Short-Form Test of Mental Maturity was the instrument used to measure the language factors intelligence quotients of both groups. It was selected because of its reported high validity and reliability. It correlated .88 with the Stanford Revision of the Binet Test. This is about as high as the latter, when given as a group test, correlates on retests (11, p. 5). Its reliability coefficient has been reported to be .94 with a standard error of 5.5 (11, p. 5). Language factors intelligence quotients, instead of total intelligence quotients, were used since pupils with relatively low reading ability would be likely to receive lower intelligence quotients on the traditional type verbal intelligence test (8, p. 358).

A tabulation of the matching factors for the two groups is given in Table I.

TABLE I
 DATA FOR MATCHING PAIRS OF THE EXPERIMENTAL
 AND CONTROL GROUPS

Experimental Group				Control Group			
Subject	Grade	Age	LFIQ*	Subject	Grade	Age	LFIQ*
E1	6	143	91	C1	6	140	92
E2	6	145	89	C2	6	142	86
E3	6	140	77	C3	6	142	80
E4	4	113	92	C4	4	110	90
E5	7	151	89	C5	7	152	88
E6	7	146	87	C6	7	155	84
E7	7	158	83	C7	7	156	82
E8	5	141	84	C8	5	142	79
E9	7	147	89	C9	7	152	94
E10	7	149	76	C10	7	159	83
E11	7	147	90	C11	7	148	96
E12	5	135	80	C12	5	132	84
E13	4	120	131	C13	4	112	126
E14	7	155	83	C14	7	145	87
E15	7	153	74	C15	7	151	77
E16	5	131	90	C16	5	124	92
E17	7	149	88	C17	7	155	86
E18	6	145	104	C18	6	146	98
E19	5	123	109	C19	5	126	107
E20	5	122	99	C20	5	121	94
E21	4	112	114	C21	4	112	110
E22	5	136	84	C22	5	143	79
E23	5	131	71	C23	5	130	79
E24	5	135	83	C24	5	138	75
E25	6	136	105	C25	6	136	104
E26	7	140	109	C26	7	148	108
E27	7	154	76	C27	7	162	79
E28	5	127	95	C28	5	123	89
E29	5	133	96	C29	5	133	99
E30	7	151	77	C30	7	158	81
E31	4	112	96	C31	4	112	90
E32	5	121	99	C32	5	128	99
E33	7	148	62	C33	7	150	69
E34	6	148	83	C34	6	141	82
E35	6	146	73	C35	6	144	70
E36	5	134	99	C36	5	129	99
E37	6	141	84	C37	6	139	90
E38	7	153	90	C38	7	152	94
E39	6	133	105	C39	6	141	99

TABLE I--Continued

Experimental Group				Control Group			
Subject	Grade	Age	LFIQ*	Subject	Grade	Age	LFIQ*
E40	6	137	104	C40	6	146	102
E41	6	141	79	C41	6	141	84
E42	6	147	80	C42	6	143	85
E43	6	146	78	C43	6	140	84
E44	6	148	116	C44	6	147	116
E45	7	162	65	C45	7	161	67
E46	7	157	84	C46	7	157	86
E47	4	111	108	C47	4	108	110
E48	6	135	105	C48	6	149	103
E49	5	130	102	C49	5	132	103
E50	7	168	83	C50	7	158	84
E51	5	134	76	C51	5	131	78
E52	6	135	101	C52	6	131	103
E53	5	145	92	C53	5	141	90
E54	7	153	83	C54	7	155	88
E55	4	130	86	C55	4	130	84
E56	6	143	93	C56	6	144	99
E57	7	155	86	C57	7	160	84
E58	5	134	97	C58	5	125	95
E59	6	145	78	C59	6	144	83
E60	5	138	87	C60	5	136	90
E61	4	121	87	C61	4	114	88
E62	6	153	93	C62	6	144	94
E63	7	146	85	C63	7	146	83
E64	6	134	86	C64	6	140	89
E65	6	149	75	C65	6	138	84
E66	6	147	91	C66	6	145	87
E67	7	146	100	C67	7	145	107
E68	6	130	100	C68	6	142	101
E69	5	133	93	C69	5	129	92
E70	5	131	98	C70	5	132	99
E71	5	134	91	C71	5	131	86
E72	7	148	83	C72	7	145	87
Sum	420	10,069	6,471	Sum	420	10,059	6,515
Mean	5.83	139.85	89.9	Mean	5.83	139.71	90.5
S. D.		12.69	12.30	S. D.		12.80	11.30

*Language factors intelligence quotient from the California Test of Mental Maturity.

It was possible to match the groups on chronological age with a mean difference of .1 month with a standard error of difference of .649. This yields a t of .216, which would allow us to accept the null hypothesis that no significant difference between the two means exists at $P > .10$. The language factors intelligence quotient mean for the experimental group was .6 higher than that of the control group. The standard error of the difference was 4.048 and a t of 1.51 would permit the acceptance of the hypothesis that no significant difference between the means of the two groups exists at $P > .10$.

Gathering and Recording Descriptive Data

A descriptive information sheet was prepared and utilized in the gathering and recording of data which were deemed appropriate to describe the experimental and control groups. (See Appendix for the form of the Descriptive Information Sheet.) The subjects of both groups were compared in socio-economic status, number of siblings, step-parent or broken home, working mother, physical handicap, visual defect, hearing loss, speech defect, poor coordination, general health, severe illness, serious accident, nervous symptoms, general behavior, grades repeated, grades skipped, grade average, school readiness, language factors intelligence quotient, non-language factors

intelligence quotient, total factors intelligence quotient, and grade placement deviations from actual grade placements in reading, spelling, and arithmetic. These possibly influencing factors were grouped under the headings of home factors, physical factors, health factors, school factors, intelligence quotients, and subjects grade placement deviations from actual grade placements.

The socio-economic status was estimated by each pupil's teacher in terms of quartiles, which corresponded closely to the social classes proposed by Rath and Abrahamson (5, pp. 6-9) and by Warner, Meeker, and Eells (13, pp. 131-159):

Quartiles Used in Study	Social Classes
Upper quartile	Upper-upper, lower-upper, and upper-middle
Third quartile	Lower-middle
Second quartile	Upper-lower
Lower quartile	Lower-lower

No upper class or lower-lower class pupils were found in the population of this investigation.

The other descriptive information was obtained from the pupil's school cumulative record. Physical and health defects and handicaps had been corrected to the extent that there seemed to be no serious educational problems due to these factors. The grade averages were estimated to the nearest .5. No pupils were found to have skipped a grade. Scores on the Metropolitan Readiness Test were used to

measure the readiness for school of the pupils when they had entered the first grade. Language factors intelligence quotients, non-language factors intelligence quotients, and total factors intelligence quotients were derived from the scores made on the California Test of Mental Maturity, which was given as a group test. Grade placements in reading, spelling, and arithmetic were taken from the results of the California Achievement Tests, and their deviations from actual grade placements were computed.

A critical comparison of these environmental and personal factors is presented in Table II. Fisher's t technique was statistically applied to the data to determine whether a significant difference existed between the two groups' means for each of the various descriptive factors. The experimental group was considered to be significantly higher in school readiness at a level of significance (P) of .05; however, readiness scores were available for only thirty-eight of the seventy-two subjects. The mean score of 70.2 for the experimental group corresponded to about the 49th percentile rank for national norms; the control group's mean score of 64.1 corresponded to about the 35th percentile rank (14, p. 27).

TABLE II
 CRITICAL COMPARISONS OF CERTAIN ENVIRONMENTAL AND
 PERSONAL FACTORS OF THE EXPERIMENTAL
 AND CONTROL GROUPS

Possible Influencing Factors	Experimental Group Mean	Control Group Mean	SE Diff	t	P
Social status	3.18	2.96	.3189	.740	>.10 NS
Number of siblings	1.54	1.65	.1925	.577	>.10 NS
Step-parent or broken home	.11	.21	.0436	1.273	>.10 NS
Mother works outside home	.06	.26	.071	.782	>.10 NS
Visual defects	.18	.10	.0585	1.426	>.10 NS
Hearing loss	.04	.01	.088	.318	>.10 NS
Poor coordination	.05	.03	.039	.718	>.10 NS
Speech defects	.14	.08	.048	1.157	>.10 NS
Below average health	.17	.21	.065	.646	>.10 NS
Serious illnesses	.15	.08	.047	1.468	>.10 NS
Serious accidents	.03	.01	.024	.584	>.10 NS
Nervous symptoms	.31	.40	.087	1.115	>.10 NS
Below average behavior	.31	.22	.071	.118	>.10 NS
Grades repeated	.25	.10	.050	2.780	<.01
Grade average	2.86	2.42	.1212	.350	>.10 NS
School readiness	70.2	64.10	3.112	1.960	<.05
Reading grade placement	-1.29	.18	.1466	10.0	<.001
Spelling grade placement	-1.46	-.642	2.037	4.025	<.001
Arithmetic grade placement	-.138	-.210	1.788	.040	>.10 NS
Language factors intelligence quotient	89.9	90.5	4.048	1.51	>.10 NS
Non-language factors intelligence quotient	107.1	100.3	2.85	2.40	<.02
Total factors intelligence quotient	98.4	95.2	1.36	2.37	<.02
Chronological age	139.85	139.71	.649	.216	>.10 NS

The experimental group was judged significantly lower in reading and spelling ability at $P=.001$ and significantly higher in non-language factors and total factors intelligence at $P=.02$. This group had repeated a significantly higher number of grades at $P=.01$ than did the control group. The two groups were not judged significantly different in any of the other factors at $P=.10$.

Whenever possible, additional data on the experimental group were obtained. This included such information as the following: (a) individual test intelligence quotients, (b) individual test reading grade placements, (c) individual personality tests findings and interpretations by the staff, and (d) reading clinicians' anecdotal records and records of pupils' reading interests and materials read. These data were gleaned from the reading clinic pupil's case record folder, which included such forms as (a) Parents' Information Sheet, (b) Principal's Referral for Individual Study, (c) Research Department's Record of Psychological Examination, (d) Reading Clinic's Information Sheet, (e) Reading Clinic's Summary of Tests, and (f) reading clinicians' anecdotal records. Most of these forms appear in the Appendix.

The Wechsler Intelligence Scale for Children provided the individual test intelligence quotients, and the Gates Reading Survey supplied the individual test reading grade

placements. Table III gives critical comparisons of individual test results with group test results for the experimental group in both reading achievement and intelligence. This group made significantly higher individual test scores on language factors intelligence quotients at a $P=.001$ and on total factors intelligence quotients at $P=.02$. It was judged significantly lower on individual test comprehension and total reading grade placement deviations from actual grade placements at $P=.001$.

Personality findings and interpretations came from one or more of such individual tests as (a) Machover Figure-Drawing Test, (b) Miale-Holsopple Sentence Completion Test, (c) Despert Fables, and (d) Children's Apperception Test. No statistical data were derived from these statements, but many of the reading clinic pupils were described as somewhat insecure, anxious, apprehensive, immature, and the like. However, no pupils were considered to be suffering from any psychological or emotional handicaps which would prevent them from benefiting from the clinical reading program. A lack of positive self-concept seemed to be present in many cases.

The reading interests of the experimental group varied; some popular preferences included mystery, scientific, mechanical, Indian, sports, comics, western, adventure, biography, prehistoric, space, animal, cartoons, outdoor, and crime stories. About as many pupils claimed

to like to read and go to school as those who claimed not to do so; however, several subjects made no statement in this regard and some professed to like to read and go to school "sometimes."

TABLE III

CRITICAL COMPARISONS OF INDIVIDUAL AND GROUP TESTS
INTELLIGENCE QUOTIENTS AND OF READING GRADE
PLACEMENT DEVIATIONS FROM ACTUAL
GRADE PLACEMENTS OF THE
EXPERIMENTAL GROUP

Intelligence or Achievement Factors	Individual Test Mean	Group Test Mean	SE _{Diff}	t	P
Language or verbal factors intelligence quotient	99.7	98.9	1.681	5.833	<.001
Non-language or performance intelligence quotient	104.8	107.1	2.182	1.054	>.10 NS
Total or full-scale intelligence quotient	102.4	98.4	1.517	2.636	<.02
Vocabulary grade placement deviation from actual grade placement	-1.92	-1.78	.156	1.17	>.10 NS
Comprehension grade placement deviation from actual grade placement	-1.94	-.89	.130	8.131	<.001
Total reading grade placement deviation from actual grade placement	-1.92	-1.32	.124	4.839	<.001

The reading clinicians' anecdotal records usually supported the staff's recommendations for (a) instruction in word attack skills, (b) high interest-low vocabulary reading materials, (c) conferences with teachers and parents to seek help in the removal of outside pressures, (d) help in gaining pupil acceptance, (e) study and use of case study data by classroom teachers, (f) relaxed and accepting atmosphere, (g) encouragement of pupil's self-direction and initiative, (h) use of art and other interests to encourage more reading at pupil's own reading level, and the like. No attempt was made to convert information on pupil's reading interests and reading needs into quantitative data for statistical comparisons.

The Test Program

Tests of self-concept and of reading achievement were administered to the experimental and control groups. The California Test of Personality, Elementary Edition, 1953, was selected for the self-concept instrument for the following reasons: (a) It yielded some seemingly appropriate aspects of self-concept and was recommended by George V. Mendenhall to be a "very good instrument to measure the self-concept of elementary children" (4). (b) Its coefficient of reliability was reported to be .94 with a standard error of 5.02 (9, pp. 4-10). The reliability of such a

conscious verbal self-report has been advocated by Allport (1, pp. 109-110) and Stephenson (7, p. 279). (c) It was designed especially for children of the ages and grade levels studied. (d) It was recommended as a good instrument to use in the phenomenological approach to personality measurement by Snygg and Combs (6, pp. 258-259). (e) It has been used widely in research studies (2). (f) Test items were often disguised so that the pupil could rationalize about certain self-concepts that would be difficult for him to admit (2, p. 5). (g) It provided quantitative data for statistical treatment. (h) It was readily available and economical in cost and time for administration, scoring, and interpretation of results. This test of personality yielded scores of personal adjustment, social adjustment, and total adjustment. Separate scores of personal adjustment for these dimensions of self were (a) self-reliance, (b) sense of personal worth, (c) sense of personal freedom, (d) feelings of belonging, (e) freedom from withdrawing tendencies, and (e) freedom from nervous symptoms. The social adjustment part of the test yielded separate scores for self-feelings and self-attitudes associated with (a) social standards, (b) social skills, (c) freedom from antisocial tendencies, (d) family relations, (e) school relations, and (f) community relations.

The reading comprehension, reading vocabulary, and total reading grade placements were ascertained with California Achievement Tests, Elementary Edition, 1957.

These tests were selected for the following reasons:

- (a) A high validity was claimed for the test (12, p. 5).
- (b) Its reliability coefficient was stated as .95 with a standard error of .2 (12, p. 5).
- (c) It provided grade placement norms for vocabulary, comprehension, and total reading.
- (d) It was readily available and economical in administration, scoring, and interpretation of results.

The California Achievement Tests have been well recommended as a valuable instrument for the appraisal of pupil progress in reading skills (3, p. 530).

After approximately seventeen weeks of school, which included two or three days per week of reading clinic instruction for the experimental group, both groups were retested with the same instruments, and changes in self-concept and reading levels were determined.

Description of the Reading Clinics

The reading clinics of the selected metropolitan school system were not limited to any particular school of psychological thought, learning theory, or frame of reference for the study and understanding of human behavior. Rather, they were founded on an eclectic and

interdisciplinary basis—a blended and balanced integration of the principles of several schools of psychology. These clinics did not prescribe to either pole of a dichotomy: (a) extreme emphasis on psychoanalytical personality therapy versus (b) extreme emphasis on mechanistic diagnosis and remedial treatment of physical handicaps and defects in the mechanics of reading. An organismic case study approach was utilized in an attempt to meet the "whole" child's physical, intellectual, social, and emotional needs and purposes. The reading clinic pupil's phenomenological internal frame of self-reference received due consideration along with his reading needs, interests, and abilities. Handicaps in vision, hearing, speech, emotional disturbances, and the like were removed or corrected before a child was admitted to a reading clinic. The pupil who qualified for the clinical reading program was considered to be reasonably normal in all respects except in his reading ability. He had failed to benefit sufficiently in the regular classroom of language arts instruction, and his problem seemed to be largely one of reading retardation. The cooperation of the research department, reading clinic, regular classroom teachers, and parents of the pupil was constantly solicited in order to enhance the total benefits to the child. The case study approach employed a combination of various methods and techniques of individualized

remedial-reading instruction in a non-threatening environment.

The referral procedure was as follows: (a) On the basis of total IQ of about 100 or above, determined by the California Test of Mental Maturity administered as a group test, and (b) on the basis of two or more years retardation in total reading ability, determined by the grade placement derived from the California Reading Test (a group test), the principal, nurse, or language arts teacher filled out and submitted to the Research Department the application form, Referral for Individual Study. (See Appendix for this form.) This was done after a conference with the parent(s) had been held and their consent obtained. Sometimes the reading clinician of the local area was contacted, and she went to the school and administered an individual reading test to the child. The Research Department set an appointment time for the parent(s) to bring the child to the administration building for individual tests of mental maturity, reading ability, and personality adjustment. A staff composed of the Assistant Superintendent in Charge of Instruction, the Director of Research, and the Consultant in Reading Instruction reviewed the case history material presented in the application and in other available pertinent case material. The staff then made recommendations

for reading clinic service or other special services needed by the child.

The individual intelligence tests were administered by school psychologists in order to determine whether the reading retardation was affected by a lack of general mental ability. This seemed necessary since the poor readers would not have been able to demonstrate their true mental abilities on group intelligence tests which required considerable reading ability (9, pp. 315-319).

Several projective and paper-and-pencil types of personality tests were administered by the school psychologists to gain (a) clues of self-feelings and other personality structures and (b) suggestions for their treatment. These tests usually included one or more of the following: (a) Machover Figure-Drawing Test, (b) Miale-Holsopple Sentence Completion Test, (c) Despert Fables, and (d) Children's Apperception Test.

An individual test in reading was administered as soon as the child was admitted to the reading clinic. This diagnostic test furnished the reading clinician valuable information regarding the pupil's reading deficiencies in vocabulary, comprehension, speed, and accuracy. Oral reading tests revealed mechanical difficulties and attitudes toward the reading of various materials. Eye movements, eye-handedness, reversals, and the like were checked. The

reading clinic pupil's remedial program was planned on a tentative hypothesis of his needs, interests, purposes, and abilities formulated after interpretation and synthesis of all cumulated information.

Various techniques and methods of instruction were used in an attempt to meet these pupil needs. Word perception techniques, the structural analysis of words, and the association of symbols and sounds were often necessary. Mechanical devices, like the tachistoscope and the Science Research Associates reading accelerator, were used to stimulate speed in the perception and meaning of words and to improve visual coordination and attention span.

Reading clinic pupils were encouraged to select reading material on their own individual reading levels and in accordance with their interests. The Science Research Associates reading laboratory provided some of the high interest-low vocabulary reading matter and permitted the pupils to keep their own records so that they were aware of their needs and progress. An interest inventory assisted the clinician in determining each pupil's reading interests, hobbies, activities, and other likes and dislikes. Individual assignments, self-help, lack of competition with peers, removal of pressures, encouragement in initiative, individualized instruction, parent-teacher conferences, anecdotal records, consideration for individuality and the

worth of a person, therapeutic counseling and guidance, empathic rapport, permissive atmosphere, and the like characterized the clinical program. The child's reading needs and his personal feelings were considered in the same situation; neither his academic nor emotional aspects were neglected or treated separately. Self-concept was thought to be an essential factor in the remedial-reading process. Retests were made from time to time in the clinic to determine reading progress and further needs. Whenever the pupil had attained approximate normal grade placement in reading ability, he was usually dismissed from the clinic. However, no pupils in this study were released from the clinics before the administration of the retests.

Reading clinic experiences were in addition to the pupil's regular academic program; he attended his classes in language arts, arithmetic, social studies, health-science, and other areas of learning. He missed some special subjects (music, art, auditorium, library, or physical education) so that he could go to a forty-five minute reading clinic class two or three days per week.

Results of the Reading Achievement Tests

Deviations of reading vocabulary, reading comprehension, and total reading grade placements from actual grade placements were computed from the scores obtained in initial tests and retests for both groups. Tables IV and V give these deviations from the expected reading levels.

TABLE IV
INITIAL TEST DEVIATIONS OF READING GRADE PLACEMENTS FROM
ACTUAL GRADE PLACEMENTS OF THE EXPERIMENTAL GROUP

Subject	Initial Test			Retest			Difference				
	Actual Grade Placement	Vocabulary Grade Placement	Comprehension Grade Placement	Total Reading Grade Placement	Actual Grade Placement	Vocabulary Grade Placement	Comprehension Grade Placement	Total Reading Grade Placement	Vocabulary Grade Placement	Comprehension Grade Placement	Total Reading Grade Placement
E1	6.5	3.4	-1.7	-2.5	6.6	-2.0	2.5	2.5	0.0	0.0	0.0
E2	5.5	1.1	-1.4	-1.4	6.6	-1.0	2.2	2.2	0.0	0.0	0.0
E3	5.5	4.4	-3.6	-4.0	6.6	-1.0	2.2	2.2	0.0	0.0	0.0
E4	5.5	1.2	-2.3	-1.1	6.6	-1.0	2.2	2.2	0.0	0.0	0.0
E5	5.5	4.0	-3.2	-3.0	6.6	-1.0	2.2	2.2	0.0	0.0	0.0
E6	5.5	1.3	-2.3	-1.1	6.6	-1.0	2.2	2.2	0.0	0.0	0.0
E7	5.5	1.4	-2.4	-1.1	6.6	-1.0	2.2	2.2	0.0	0.0	0.0
E8	5.5	2.0	-2.0	-1.1	6.6	-1.0	2.2	2.2	0.0	0.0	0.0
E9	5.5	1.5	-1.9	-1.0	6.6	-1.0	2.2	2.2	0.0	0.0	0.0
E10	5.5	1.1	-1.9	-1.0	6.6	-1.0	2.2	2.2	0.0	0.0	0.0
E11	5.5	1.8	-1.8	-1.0	6.6	-1.0	2.2	2.2	0.0	0.0	0.0
E12	5.5	2.1	-1.8	-1.0	6.6	-1.0	2.2	2.2	0.0	0.0	0.0
E13	5.5	2.7	-1.8	-1.0	6.6	-1.0	2.2	2.2	0.0	0.0	0.0
E14	5.5	2.7	-1.8	-1.0	6.6	-1.0	2.2	2.2	0.0	0.0	0.0
E15	5.5	1.6	-2.0	-1.0	6.6	-1.0	2.2	2.2	0.0	0.0	0.0
E16	5.5	0.6	-2.3	-2.0	6.6	-1.0	2.2	2.2	0.0	0.0	0.0
E17	5.5	1.4	-2.9	-2.0	6.6	-1.0	2.2	2.2	0.0	0.0	0.0

TABLE IV--Continued

Subject	Initial Test				Retest				Difference		
	Actual Grade Placement	Vocabulary Grade Placement	Comprehension Grade Placement	Total Reading Grade Placement	Actual Grade Placement	Vocabulary Grade Placement	Comprehension Grade Placement	Total Reading Grade Placement	Vocabulary Grade Placement	Comprehension Grade Placement	Total Reading Grade Placement
E18	5.9	-0.3	-0.2	-0.2	6.0	-0.9	-1.0	-0.5	0.0	0.0	0.4
E19	5.9	-0.1	-0.2	-0.2	6.0	-0.3	-0.9	-0.3	1.0	0.0	1.0
E20	4.5	-1.6	-1.9	-1.7	5.9	-1.0	-0.9	-0.6	0.0	0.0	0.0
E21	5.7	-2.0	-0.2	-1.1	6.5	-1.2	-0.8	-1.9	0.0	0.0	0.0
E22	5.5	-1.5	-2.4	-2.0	6.9	-2.4	-1.8	-2.2	-0.7	0.0	0.4
E23	5.7	-3.1	-2.3	-2.9	6.9	-2.9	-2.0	-2.1	0.5	0.0	0.0
E24	5.5	-0.4	0.0	-0.2	6.9	-0.9	-1.0	0.1	-0.5	0.0	0.3
E25	7.2	-1.8	1.7	0.0	7.9	-0.2	0.9	0.4	0.6	-0.8	0.1
E26	5.2	-0.8	-1.0	-2.6	6.7	-2.2	-1.7	-0.8	0.1	0.0	0.4
E27	5.2	-2.8	-1.9	-3.6	6.0	-2.7	-1.9	-1.9	0.6	0.0	0.1
E28	5.5	-1.7	-1.9	-3.8	6.0	-3.3	-0.9	-0.6	1.4	0.2	0.4
E29	4.9	-7.6	-4.5	-6.0	8.0	-3.9	-5.0	-4.4	3.7	-0.5	1.2
E30	4.2	-4.2	-1.4	-2.8	7.0	-2.8	-0.1	-0.9	3.0	1.3	2.2
E31	5.2	-1.8	-0.4	-1.1	6.7	-1.6	-1.5	-1.5	0.2	-1.1	0.4
E32	5.6	-2.0	-1.9	-1.5	6.9	-3.0	-2.0	-2.9	-1.0	0.0	0.7
E33	5.9	-2.4	-1.3	-1.5	6.0	-3.2	-2.0	-2.1	0.8	-0.7	0.0
E34	6.2	-2.4	-1.3	-1.2	6.9	-3.0	-2.0	-2.1	0.8	-0.7	0.0
E35	6.2	-1.7	-0.6	-1.1	6.9	-2.9	-1.0	-0.1	0.0	0.0	0.0
E36	5.9	-1.4	-0.6	-0.4	6.0	-1.5	-0.9	-0.2	0.0	-1.0	0.0
E37	5.5	-2.3	-0.9	-1.6	6.0	-1.5	-0.9	-1.2	0.0	-1.0	0.0

TABLE IV--Continued

Subject	Initial Test			Actual Grade Placement	Retest			Difference		
	Actual Grade Placement	Vocabulary Grade Placement	Comprehension Grade Placement		Total Reading Grade Placement	Vocabulary Grade Placement	Comprehension Grade Placement	Total Reading Grade Placement	Vocabulary Grade Placement	Comprehension Grade Placement
E38	7.1	-1.9	-1.8	7.6	-2.7	-2.2	-2.2	-0.4	-0.4	-0.4
E39	6.1	-0.8	-0.8	6.9	-1.3	-0.6	-1.4	-2.9	-1.4	-2.2
E40	6.5	-1.2	-0.5	6.9	-0.4	0.1	0.4	-0.1	0.4	0.6
E41	6.5	-1.6	-1.1	6.9	0.3	-0.4	0.4	1.2	0.1	0.9
E42	6.5	-2.7	-2.3	6.9	-0.7	-1.0	-1.3	-0.3	1.4	0.2
E43	6.5	-2.8	-2.0	6.9	-0.7	-0.7	-2.3	-0.8	1.3	0.2
E44	6.5	-0.9	-1.0	6.9	-0.7	-0.7	-0.7	-0.1	0.3	0.1
E45	7.5	-3.5	-0.2	7.9	-1.9	1.3	-0.3	1.6	2.0	1.8
E46	7.5	-2.5	-0.9	7.9	-2.9	1.7	-2.3	-0.4	1.5	1.0
E47	4.3	-1.8	-0.9	4.9	-2.2	-2.1	-2.1	-0.4	-1.2	-0.8
E48	6.6	-0.8	0.5	7.0	-1.6	-0.9	-1.3	-0.8	-1.4	-1.2
E49	5.5	-5.5	0.6	5.9	-0.5	0.6	0.1	5.0	0.0	2.5
E50	7.8	-1.4	-0.3	8.3	-0.9	-0.2	0.4	2.3	0.1	1.0
E51	5.1	-2.0	2.8	5.9	-1.7	1.2	-1.4	0.3	1.6	1.0
E52	6.6	0.7	1.1	7.0	0.5	1.5	1.0	-0.2	0.4	2.1
E53	5.9	-2.6	-0.4	6.4	-0.3	1.5	0.6	2.3	1.9	0.0
E54	7.4	-2.4	-1.1	7.9	-3.4	-0.4	-1.8	-1.0	0.7	0.0
E55	4.4	0.6	1.0	4.9	0.4	0.5	0.5	-0.2	-0.5	0.3
E56	6.1	0.6	0.8	6.9	0.3	1.1	0.8	-0.2	0.3	1.0
E57	7.4	-0.7	0.4	7.9	0.3	1.5	0.9	1.0	1.1	1.0

TABLE IV--Continued

Subject	Initial Test				Retest				Difference					
	Actual Grade Placement	Vocabulary Grade Placement	Comprehension Grade Placement	Total Reading Grade Placement	Actual Grade Placement	Vocabulary Grade Placement	Comprehension Grade Placement	Total Reading Grade Placement	Vocabulary Grade Placement	Comprehension Grade Placement	Total Reading Grade Placement	Vocabulary Grade Placement	Comprehension Grade Placement	Total Reading Grade Placement
E58	5.4	-1.2	0.1	-0.6	5.8	-1.1	1.8	0.4	0.1	1.7	1.0	0.7	1.0	1.0
E59	5.4	-0.3	-0.6	-0.4	5.8	-0.4	-1.4	-0.9	-0.1	1.7	-0.5	1.0	0.8	-0.5
E60	5.4	-1.5	-0.7	-1.0	5.8	-0.2	-0.5	-0.3	0.1	1.7	0.2	0.1	0.2	0.2
E61	4.2	-2.1	1.0	-1.5	4.7	-1.4	-0.7	-1.0	0.2	1.7	0.3	0.1	0.3	0.5
E62	6.1	0.9	-1.8	1.2	6.6	-0.9	3.4	1.1	-1.5	1.7	0.1	1.5	0.1	0.1
E63	7.4	-3.2	-1.4	-2.3	6.9	-0.1	-1.5	-0.2	0.3	1.7	0.8	0.1	0.8	1.7
E64	6.4	-0.2	0.4	0.2	6.9	-0.7	0.4	0.0	-0.0	1.7	0.2	0.0	0.0	0.2
E65	6.6	0.0	0.3	0.2	7.0	-0.8	0.7	0.0	0.0	1.7	0.0	0.0	0.0	0.0
E66	6.4	0.0	1.4	0.8	6.8	1.8	2.0	1.6	1.8	1.7	0.6	0.4	0.6	1.1
E67	7.4	-4.1	-2.1	-3.1	7.8	2.0	-0.4	-1.0	0.2	1.7	1.7	0.4	1.7	1.6
E68	6.4	0.1	0.5	0.8	6.8	0.0	0.9	0.5	0.1	1.7	0.4	0.1	0.4	0.5
E69	5.8	-1.2	-0.4	-0.8	6.3	-2.0	-0.7	-1.3	-0.1	1.7	0.3	0.0	0.3	0.5
E70	5.8	-3.0	-2.1	-2.6	6.0	0.2	-2.7	-2.0	-0.2	1.7	0.6	0.0	0.6	0.3
E71	5.6	-1.0	-0.9	-0.9	6.0	-0.4	-1.5	-0.9	0.0	1.7	0.6	0.0	0.6	0.0
E72	5.6	-2.7	-0.7	-1.7	8.0	-2.0	-2.3	-2.1	0.0	1.7	0.7	-1.6	0.0	-0.4
Sum	451.6	-124.7	-63.8	-92.7	482.9	-85.7	-27.6	-53.9	39.0	36.2	38.8	36.2	38.8	38.8
Mean	6.27	-1.73	-.89	-1.29	6.71	-1.19	-.38	-.75	.54	.50	.54	.50	.54	.54
S. D.	.885	1.730	1.205	1.020	.990	1.265	1.585	1.245	1.190	.927	.798	.927	.798	.798

TABLE V--Continued

Subject	Initial Test				Retest				Difference		
	Actual Grade	Vocabulary Grade Placement	Comprehension Grade Placement	Total Reading Grade Placement	Actual Grade Placement	Vocabulary Grade Placement	Comprehension Grade Placement	Total Reading Grade Placement	Vocabulary Grade Placement	Comprehension Grade Placement	Total Reading Grade Placement
018	4.4	0.7	1.1	0.0	3.9	1.1	0.0	1.1	1.0	0.0	0.2
019	5.4	1.4	1.0	0.0	5.8	1.1	0.0	0.0	1.0	0.0	0.3
020	5.4	-0.4	0.6	0.0	5.8	1.1	0.0	0.0	1.0	0.0	-0.1
021	4.4	4.6	2.5	0.0	3.8	1.1	0.0	0.0	1.0	0.0	-0.4
022	5.1	0.7	1.0	0.0	5.1	1.1	0.0	0.0	1.0	0.0	0.1
023	5.1	-0.8	0.1	0.0	5.1	1.1	0.0	0.0	1.0	0.0	0.4
024	5.1	1.1	1.1	0.0	5.1	1.1	0.0	0.0	1.0	0.0	0.6
025	6.4	2.0	1.1	0.0	6.4	1.1	0.0	0.0	1.0	0.0	0.7
026	7.5	1.1	1.1	0.0	7.5	1.1	0.0	0.0	1.0	0.0	0.5
027	7.4	0.7	0.0	0.0	7.4	1.1	0.0	0.0	1.0	0.0	0.4
028	5.2	0.0	0.0	0.0	5.2	1.1	0.0	0.0	1.0	0.0	1.1
029	5.4	0.5	0.0	0.0	5.4	1.1	0.0	0.0	1.0	0.0	0.4
030	7.5	1.0	0.0	0.0	7.5	1.1	0.0	0.0	1.0	0.0	0.4
031	4.4	0.6	0.0	0.0	4.4	1.1	0.0	0.0	1.0	0.0	0.4
032	5.1	0.9	0.0	0.0	5.1	1.1	0.0	0.0	1.0	0.0	0.4
033	7.6	1.1	1.0	0.0	7.6	1.1	0.0	0.0	1.0	0.0	-1.1
034	6.4	0.3	1.1	0.0	6.4	1.1	0.0	0.0	1.0	0.0	-0.3
035	6.4	-0.5	0.0	0.0	6.4	1.1	0.0	0.0	1.0	0.0	1.0
036	5.4	2.4	1.1	0.0	5.4	1.1	0.0	0.0	1.0	0.0	0.5
037	6.4	0.6	1.1	0.0	6.4	1.1	0.0	0.0	1.0	0.0	0.0

TABLE V--Continued

Subject	Initial Test			Retest			Difference				
	Actual Grade Placement	Vocabulary Grade Placement	Comprehension Grade Placement	Total Reading Grade Placement	Actual Grade Placement	Vocabulary Grade Placement	Comprehension Grade Placement	Total Reading Grade Placement	Vocabulary Grade Placement	Comprehension Grade Placement	Total Reading Grade Placement
038	7.1	0.0	0.0	0.0	9.8	0.0	0.0	0.0	0.0	0.0	0.0
039	6.4	0.0	0.0	0.0	9.8	0.0	0.0	0.0	0.0	0.0	0.0
040	6.4	0.0	0.0	0.0	9.8	0.0	0.0	0.0	0.0	0.0	0.0
041	7.1	0.0	0.0	0.0	9.8	0.0	0.0	0.0	0.0	0.0	0.0
042	6.4	0.0	0.0	0.0	9.8	0.0	0.0	0.0	0.0	0.0	0.0
043	6.4	0.0	0.0	0.0	9.8	0.0	0.0	0.0	0.0	0.0	0.0
044	7.1	0.0	0.0	0.0	9.8	0.0	0.0	0.0	0.0	0.0	0.0
045	7.1	0.0	0.0	0.0	9.8	0.0	0.0	0.0	0.0	0.0	0.0
046	4.4	0.0	0.0	0.0	9.8	0.0	0.0	0.0	0.0	0.0	0.0
047	6.4	0.0	0.0	0.0	9.8	0.0	0.0	0.0	0.0	0.0	0.0
048	6.4	0.0	0.0	0.0	9.8	0.0	0.0	0.0	0.0	0.0	0.0
049	5.9	0.0	0.0	0.0	9.8	0.0	0.0	0.0	0.0	0.0	0.0
050	7.1	0.0	0.0	0.0	9.8	0.0	0.0	0.0	0.0	0.0	0.0
051	5.4	0.0	0.0	0.0	9.8	0.0	0.0	0.0	0.0	0.0	0.0
052	5.4	0.0	0.0	0.0	9.8	0.0	0.0	0.0	0.0	0.0	0.0
053	5.4	0.0	0.0	0.0	9.8	0.0	0.0	0.0	0.0	0.0	0.0
054	7.6	0.0	0.0	0.0	9.8	0.0	0.0	0.0	0.0	0.0	0.0
055	4.4	0.0	0.0	0.0	9.8	0.0	0.0	0.0	0.0	0.0	0.0
056	4.4	0.0	0.0	0.0	9.8	0.0	0.0	0.0	0.0	0.0	0.0
057	7.1	0.0	0.0	0.0	9.8	0.0	0.0	0.0	0.0	0.0	0.0

TABLE V--Continued

Subject	Initial Test			Retest			Difference				
	Actual Grade Placement	Vocabulary Grade Placement	Comprehension Grade Placement	Total Heading Grade Placement	Actual Grade Placement	Vocabulary Grade Placement	Comprehension Grade Placement	Total Heading Grade Placement	Vocabulary Grade Placement	Comprehension Grade Placement	Total Heading Grade Placement
C58	5.4	1.0	0.4	0.7	5.8	0.7	0.1	0.4	-0.3	-0.2	-0.3
C59	6.1	0.3	0.1	0.2	5.9	0.4	0.9	0.7	0.1	0.8	0.5
C60	5.1	0.5	-1.0	-0.2	4.9	-0.2	-0.8	-0.5	0.7	0.2	0.4
C61	4.4	1.4	0.3	0.1	4.5	0.1	0.1	0.0	-0.4	-0.4	-0.4
C62	6.1	0.8	0.1	0.5	6.9	0.8	1.2	1.4	0.1	1.2	0.6
C63	7.1	0.0	-0.8	-0.1	6.9	-0.8	-1.2	-1.0	0.0	-0.4	-0.2
C64	6.1	0.7	1.1	0.1	6.9	0.4	0.4	0.6	-0.1	0.0	-0.1
C65	6.1	0.4	0.6	0.2	6.0	0.5	0.5	0.4	-0.6	-1.0	-0.8
C66	6.1	0.4	-0.2	0.7	6.8	0.2	-0.4	0.1	1.1	0.1	0.6
C67	7.6	2.0	1.5	0.3	8.0	0.3	1.1	0.3	-0.7	-0.2	-0.4
C68	6.4	0.8	0.5	0.8	6.8	0.8	1.1	1.4	-0.4	-0.4	-0.4
C69	5.1	0.8	-0.5	-0.3	5.6	0.6	0.6	0.5	1.1	0.9	1.0
C70	5.1	1.2	0.9	0.8	6.6	0.8	-0.6	0.1	2.0	-1.1	0.4
C71	5.1	0.2	0.6	1.4	6.6	1.4	1.9	1.7	1.2	1.0	1.1
C72	7.1	-0.2	-1.2	-0.6	7.6	-0.6	-0.9	-0.7	-0.4	0.3	0.0
Sum	443.4	17.9	4.1	12.9	474.7	21.4	-2.4	11.1	3.5	-6.5	-1.8
Mean	6.16	.25	.06	.18	6.60	.30	-.03	.15	.05	-.09	-.02
S.D.	1.041	1.215	1.017	1.016	1.101	1.220	1.084	1.148	.888	.440	.606

The differences of initial test and retest deviations from the expected grade placements are also given in the above two tables. In column one, each subject of the experimental group is represented with the letter "E" and a number; each control group subject is designated with the letter "C" and a number. Actual grade placements, at the time of the administration of initial tests, are given in column two; actual grade placements at the time of retesting are found in column six. Minus signs were used to designate deviations of vocabulary, comprehension, and total reading grade placements below actual or expected grade placements. Column ten gives the changes from initial tests to retests of vocabulary grade placement deviations from actual grade placements. Negative numbers represent a loss in the retests. Columns eleven and twelve give this information for comprehension and total reading.

Results of the Tests of Self-Concept

Actual scores on the California Test of Personality were used to represent the levels of personal, social, and total self-concepts of the subjects. These are given in Tables VI and VII. The differences or changes in levels of self-concept appear in columns eight, nine, and ten. Negative numbers represent a decrease from the initial test scores to the retest scores.

TABLE VI.

EXPERIMENTAL GROUP'S LEVELS OF SELF-CONCEPT IN
TERMS OF INITIAL TEST SCORES MADE ON THE
CALIFORNIA TEST OF PERSONALITY

Subject	Initial Test			Retest			Difference		
	Personal Self-Concept	Social Self-Concept	Total Self-Concept	Personal Self-Concept	Social Self-Concept	Total Self-Concept	Personal Self-Concept	Social Self-Concept	Total Self-Concept
E1	48	53	101	51	43	94	3	-10	-7
E2	38	34	72	47	49	96	9	15	24
E3	43	54	97	49	61	110	6	7	13
E4	49	54	103	46	58	104	-3	4	1
E5	49	64	113	60	69	129	11	5	16
E6	53	64	117	46	50	96	-7	-14	-21
E7	20	37	57	25	36	61	5	-1	4
E8	49	59	108	66	66	132	17	7	24
E9	66	64	130	66	70	136	0	6	6
E10	54	50	104	63	55	118	9	5	14
E11	61	66	127	67	68	135	6	2	8
E12	45	50	95	61	60	121	16	10	26
E13	44	49	93	60	66	126	16	17	33
E14	53	51	104	56	59	115	3	8	11
E15	60	50	110	65	62	127	5	12	17
E16	46	58	104	49	49	98	3	-9	-6
E17	53	52	105	53	63	116	0	11	11
E18	45	52	97	43	40	83	-2	-12	-14
E19	38	27	65	40	59	99	2	32	34
E20	53	52	105	65	62	127	12	10	22
E21	46	53	99	48	58	106	2	5	7
E22	58	64	122	52	38	90	-6	-26	-32
E23	39	42	81	62	60	122	23	18	41
E24	32	34	66	41	48	89	9	14	23
E25	61	68	129	69	70	139	8	2	10
E26	46	57	103	37	51	88	-9	-6	-15
E27	42	59	101	65	69	134	23	10	33
E28	34	51	85	38	46	84	4	-5	-1
E29	37	48	85	53	55	108	16	7	23
E30	50	49	99	57	51	108	7	2	9
E31	60	61	121	57	61	118	-3	0	-3

TABLE VI--Continued

Subject	Initial Test			Retest			Difference		
	Personal Self-Concept	Social Self-Concept	Total Self-Concept	Personal Self-Concept	Social Self-Concept	Total Self-Concept	Personal Self-Concept	Social Self-Concept	Total Self-Concept
E32	44	54	98	48	64	112	4	10	14
E33	48	65	113	58	66	124	10	1	11
E34	55	54	109	52	60	112	-3	6	3
E35	34	38	72	59	59	118	25	21	46
E36	63	63	126	66	67	133	3	4	7
E37	30	44	74	27	44	71	-3	0	-3
E38	59	63	122	59	59	118	0	-4	-4
E39	48	63	111	54	61	115	6	-2	4
E40	47	52	99	50	47	97	3	-5	-2
E41	58	69	127	68	68	134	10	-3	7
E42	54	58	112	46	57	103	-8	-1	-9
E43	34	45	79	46	52	98	12	7	19
E44	48	56	104	67	67	134	19	11	30
E45	34	47	81	44	55	99	10	8	18
E46	44	55	99	43	49	92	-1	-6	-7
E47	57	61	118	64	63	127	7	2	9
E48	67	62	129	67	67	134	0	5	5
E49	60	57	117	63	68	131	3	11	14
E50	47	57	104	42	60	102	-5	3	2
E51	57	55	112	59	59	118	2	4	6
E52	54	60	114	65	67	132	11	7	18
E53	59	60	119	66	69	135	7	9	16
E54	58	45	103	65	56	121	7	11	18
E55	57	51	108	63	69	132	6	18	24
E56	68	64	132	67	67	134	-1	3	2
E57	55	57	112	63	55	118	8	-2	6
E58	54	66	120	62	69	131	8	3	11
E59	63	61	124	56	41	97	-7	-20	-27
E60	46	56	102	59	60	119	13	4	17
E61	56	69	125	61	71	132	5	2	7
E62	47	55	102	43	54	97	-4	-1	-5
E63	43	42	85	54	56	110	11	14	25
E64	62	59	121	65	64	129	3	5	8
E65	46	57	103	51	63	114	5	6	11
E66	69	68	137	71	69	140	2	1	3

TABLE VI--Continued

Subject	Initial Test			Retest			Difference		
	Personal Self-Concept	Social Self-Concept	Total Self-Concept	Personal Self-Concept	Social Self-Concept	Total Self-Concept	Personal Self-Concept	Social Self-Concept	Total Self-Concept
E67	22	27	49	43	53	96	21	26	47
E68	59	62	121	65	67	132	6	5	11
E69	52	58	110	61	57	118	0	-1	8
E70	36	39	75	35	28	63	-1	-11	-12
E71	67	61	128	48	45	93	-19	-16	-35
E72	49	52	101	58	60	118	9	8	17
Sum	3852	3913	7495	3960	4182	8142	387	269	647
Mean	49.75	54.35	104.10	55.00	58.08	113.08	5.25	3.73	8.98
S.D.	10.44	9.84	18.65	10.44	9.36	18.25	8.10	10.25	13.55

It was of interest to compare these means with the approximate scores corresponding to the 50th percentile rank given by the authors of the test: Personal, 54; Social, 60; and Total, 114 (12, p. 29). Both the experimental and control groups made, on the initial tests, much lower scores than those expected considering national statistical norms. The means for the control group were: Personal, 49.6; Social, 53.4; and Total, 103.0. The means for the experimental group were very similar: Personal, 49.76; Social, 54.35; and Total, 104.10.

TABLE VII

CONTROL GROUP'S LEVELS OF SELF-CONCEPT IN TERMS
OF INITIAL TEST SCORES MADE ON THE
CALIFORNIA TEST OF PERSONALITY

Subject	Initial Test			Retest			Difference		
	Personal Self-Concept	Social Self-Concept	Total Self-Concept	Personal Self-Concept	Social Self-Concept	Total Self-Concept	Personal Self-Concept	Social Self-Concept	Total Self-Concept
C1	56	66	122	56	62	118	0	-4	-4
C2	40	39	79	34	37	71	-6	-2	-8
C3	59	64	123	63	68	131	4	4	8
C4	58	50	108	61	46	107	3	-4	-1
C5	51	62	113	62	65	127	11	3	14
C6	46	51	97	41	45	86	-5	-6	-11
C7	39	40	79	60	58	118	21	18	39
C8	34	48	82	39	52	91	5	4	9
C9	57	62	119	53	59	112	-4	-3	-7
C10	48	58	106	43	61	104	-5	3	-2
C11	40	46	86	32	47	79	-8	1	-7
C12	56	64	120	63	66	129	7	2	9
C13	63	62	125	58	53	111	-5	-9	-14
C14	57	49	106	56	53	109	-1	4	3
C15	37	38	75	37	41	78	0	3	3
C16	59	66	125	56	69	125	-3	3	0
C17	49	44	93	52	52	104	3	8	11
C18	63	67	130	64	62	126	1	-5	-4
C19	54	64	118	69	67	136	15	3	18
C20	53	44	97	55	31	86	2	-13	-11
C21	49	60	109	60	66	126	11	6	17
C22	39	59	98	47	61	108	8	2	10
C23	56	40	96	47	41	88	-9	1	-8
C24	51	63	114	60	46	106	9	-17	-8
C25	53	58	111	49	54	103	-4	-4	-8
C26	64	50	114	65	61	126	1	11	12
C27	66	68	134	65	66	131	-1	-2	-3
C28	61	55	116	66	42	108	5	-13	-8
C29	51	52	103	57	62	119	6	10	16
C30	63	54	117	67	58	125	4	4	8
C31	61	68	129	65	60	125	4	-8	-4

TABLE VII--Continued

Subject	Initial Test			Retest			Difference		
	Personal Self-Concept	Social Self-Concept	Total Self-Concept	Personal Self-Concept	Social Self-Concept	Total Self-Concept	Personal Self-Concept	Social Self-Concept	Total Self-Concept
C32	48	34	82	34	36	70	-14	2	-12
C33	29	42	71	35	52	87	6	10	16
C34	55	68	123	66	68	134	11	0	11
C35	32	44	76	26	41	67	-6	-3	-9
C36	62	59	121	65	58	123	3	-1	2
C37	35	45	80	34	30	64	-1	-15	-16
C38	36	41	77	47	49	96	11	8	19
C39	46	50	96	35	46	81	-11	-4	-15
C40	40	43	83	51	49	100	11	6	17
C41	60	67	127	69	68	137	9	1	10
C42	33	48	81	26	42	68	-7	-6	-13
C43	60	61	121	59	42	101	-1	-19	-20
C44	62	65	127	67	66	133	5	1	6
C45	43	44	87	50	58	108	7	14	21
C46	54	61	115	54	65	119	0	4	4
C47	58	64	122	65	41	106	7	-23	-16
C48	48	41	89	35	37	72	-13	-4	-17
C49	57	66	123	56	58	114	-1	-8	-9
C50	27	33	60	42	43	85	15	10	25
C51	49	61	110	60	59	119	11	-2	9
C52	40	49	89	40	37	77	0	-12	-12
C53	63	63	126	57	63	120	-6	0	-6
C54	50	58	108	52	57	109	2	-1	1
C55	64	66	130	67	66	133	3	0	3
C56	57	45	102	68	66	134	11	21	32
C57	42	37	79	72	62	134	30	25	55
C58	52	62	114	59	61	120	7	-1	6
C59	33	28	61	34	35	69	1	7	8
C60	34	48	82	31	32	63	-3	-16	-19
C61	35	52	87	28	45	73	-7	-7	-14
C62	65	69	134	69	68	137	4	-1	3
C63	57	65	122	47	66	113	-10	1	-9
C64	53	44	97	52	48	100	-1	4	3
C65	57	65	122	56	65	121	-1	0	-1
C66	42	46	88	45	48	93	3	2	5

TABLE VII--Continued

Subject	Initial Test			Retest			Difference		
	Personal Self-Concept	Social Self-Concept	Total Self-Concept	Personal Self-Concept	Social Self-Concept	Total Self-Concept	Personal Self-Concept	Social Self-Concept	Total Self-Concept
C67	51	59	110	65	68	133	14	9	23
C68	58	55	113	68	61	129	10	6	16
C69	39	58	97	48	59	107	9	1	10
C70	39	45	84	38	40	78	-1	-5	-6
C71	31	30	61	44	48	92	13	18	31
C72	46	52	98	46	38	84	0	-14	-14
Sum	3575	3844	7419	3764	3852	7616	189	8	197
Mean	49.65	53.39	103.04	52.28	53.50	105.78	2.62	.11	2.74
S.D.	10.53	5.10	12.60	12.57	11.01	22.10	7.84	9.20	14.90

On the retests, there was little change in the means of the control group: Personal, 52.3; Social, 53.5; and Total, 105.8. The experimental group means more nearly approximated the national norms of the test: Personal, 55.00; Social, 58.08; and Total, 113.08.

Summary

The subjects of this investigation were seventy-two reasonably normal, elementary upper-grade boys of a southwestern metropolis. The experimental group was matched by pairs to form a comparable control group. The matching factors used were sex, chronological age, and language

factors intelligence quotient. The boys in the experimental group were operating on a reading level of approximately two years or more below national norms; the members of the control group were operating on a reading level of no more than one year below national statistical norms.

The California Achievement Tests were used to measure the subjects' vocabulary, comprehension, and total reading grade placements, which were converted into deviations from the actual grade placements. The intelligence quotients were derived from administrations of the California Short-Form Test of Mental Maturity. The instrument used to measure personal, social, and total self-concept levels of the two groups was the California Test of Personality.

Descriptive information of the two groups was collected and recorded on a descriptive information sheet. Using Fisher's t technique, the significances of the difference of the two groups' means for the various factors were statistically computed. The two groups appeared to be significantly different at $P=.05$ or better in grades repeated, school readiness, reading level deviations from the expected, spelling level deviations from the expected, non-language intelligence, and total intelligence.

After approximately seventeen weeks, both groups were retested with the same reading and self-concept instruments.

Changes in reading levels and self-concept levels of the experimental and control groups were determined.

The Reading Clinic was described as a rather typical one, which attempted to integrate personality therapy with reading instruction based upon individual needs. Removal of pressures and emphasis on encouragement and pupil initiative were common practices in the Clinic.

The results of the reading achievement tests and of the self-concept tests were presented in tables and explained. The means for reading levels and self-concept levels, and the differences of these from initial testing to retesting for both groups were given so that they could be statistically treated, studied, and compared.

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CHAPTER IV

STATISTICAL TREATMENT OF DATA

Correlations of the Self-Concept Levels with the Reading Levels at the Beginning of the Experiment

The first hypothesis of this study was stated as follows: For children with approximately normal and equal language factors of intelligence, levels of certain personal and social aspects of self-concept are associated with levels of reading vocabulary, comprehension, and total reading skills. To test statistically the tenability of this hypothesis, the relationships between each of the three aspects of self-concept with each of the three aspects of reading ability were determined from initial test data for the experimental and control groups with the Pearson's product moment coefficient of correlation formula:

$$r = \frac{N \sum d_x d_y - (\sum f d_x) (\sum f d_y)}{\sqrt{[N \sum f d_x^2 - (\sum f d_x)^2] [N \sum f d_y^2 - (\sum f d_y)^2]}}$$

r = coefficient of correlation
 N = number of cases
 \sum = sum of
 f = frequency
 d = deviation of a score from the mean
 x = reading grade placement deviations from actual grade placements
 y = self-concept scores.

Values substituted in the formula were derived from scatter diagrams or correlation tables. Directions for the computation of r , like those found in Quinn McNemar's Psychological Statistics (1, pp. 115-121), were followed.

Table VIII gives these correlations for the experimental group; the correlations for the control group appear in Table IX.

TABLE VIII

CORRELATIONS OF THE EXPERIMENTAL GROUP'S SELF-CONCEPT
LEVELS WITH ITS READING LEVELS IN TERMS OF
INITIAL TEST SELF-CONCEPT SCORES AND
READING GRADE PLACEMENT
DEVIATIONS FROM ACTUAL
GRADE PLACEMENTS

Aspects of Self-Concept	Vocabulary Grade Placement	Comprehension Grade Placement	Total Reading Grade Placement
Personal self-concept	.253	.366	.344
Social self-concept	.232	.315	.311
Total self-concept	.272	.370	.359

All correlations were low positive ones, clustering close together with a range from .202 to .370. All r for the experimental group (and all but two for the control group) met the critical requirement for significance of .232 at df of 70 at the .05 level (3, p. 231).

TABLE IX

CORRELATIONS OF THE CONTROL GROUP'S SELF-CONCEPT LEVELS
WITH ITS READING LEVELS IN TERMS OF INITIAL TEST
SELF-CONCEPT SCORES AND READING GRADE
PLACEMENT DEVIATIONS FROM ACTUAL
GRADE PLACEMENTS

Aspects of Self-Concept	Vocabulary Grade Placement	Comprehension Grade Placement	Total Reading Grade Placement
Personal self-concept	.300	.331	.345
Social self-concept	.216	.202	.250
Total self-concept	.276	.302	.319

There seemed to be little difference between correlations of the two groups for the various factors; those of the experimental group ran somewhat higher except for personal self-concept with vocabulary grade placement. The correlations of personal self-concept with total reading and total self-concept with vocabulary were very close for the two groups.

Critical Comparison of the Self-Concept Levels of the
Experimental and Control Groups at the
Beginning of the Experiment

The second hypothesis of this investigation was as follows: For children with approximately normal and equal language factors of intelligence, there is a significant

difference between the levels of self-concept of pupils with persistent reading problems and the levels of self-concept of pupils with reasonably normal reading abilities. The null hypothesis, that no significant population difference exists between the self-concept means for the experimental and control groups, was statistically tested with Fisher's t technique and initial test data on personal, social, and total self-concept. The formula used was as follows:

$$t = \frac{M_D}{\sqrt{\frac{\frac{\sum D^2}{N} - (M_D)^2}{N - 1}}}$$

$$M_D = M_E - M_C.$$

$$df = N - 1.$$

t = small sample critical requirement
 N = number of cases
 M = mean
 M_E = mean for experimental group
 M_C = mean for control group
 M_D = mean difference in self-concept scores
 for the group
 df = degrees of freedom.

Values substituted into the formula were derived from tables of the differences in raw scores of the matched individuals of the groups. Instructions for computing t were found in Psychological Statistics by Quinn McNemar (1, pp. 104-109). The 5 per cent level of significance was the point selected for rejection of the null hypothesis.

Table X shows the significance of the differences between the means of the experimental and control groups' initial test personal, social, and total self-concept levels.

TABLE X
SIGNIFICANCE OF THE DIFFERENCES BETWEEN THE INITIAL TEST SELF-CONCEPT MEANS OF THE EXPERIMENTAL AND CONTROL GROUPS

Self-Concept Aspects	Control Group Mean	Experimental Group Mean	SE _{Diff}	<u>t</u>	P
Personal self-concept	49.65	49.75	1.75	.26	>.10 NS
Social self-concept	53.33	54.35	1.67	.60	>.10 NS
Total self-concept	103.0	104.1	3.24	.324	>.10 NS

The mean difference in personal self-concept levels of the two groups was found to be very small (.10 in the direction of the higher level for the experimental group). Column four shows the standard error for this difference. The t of .26 for the difference of personal self-concept means for the two groups did not meet the critical requirement (t) of 2.00 for a df of 71 at the .05 level of significance. In fact, it failed to meet the required t of 1.67 at the .1 significance level. Column six shows that

the difference in the personal self-concept means for the two groups was not significant at the level of significance (P) of .10. Reading the table in the same manner, it is evident that no significant difference at $P=.10$ was found to exist between the means of the two groups for either social or total self-concept levels. Table E in Psychological Statistics (1, p. 388) gives the required distribution of t .

Critical Comparison of the Changes in the Self-Concept Levels of the Experimental and Control Groups

The third hypothesis was stated as follows: Changes in the levels of certain personal and social aspects of self-concept are associated with experiences in a clinical remedial-reading program. The null hypothesis was statistically tested with Fisher's t statistic, using the differences in initial test and retest personal, social, and total self-concept scores for each group. The null hypothesis was that no significant changes in the self-concept levels of the experimental group occurred after the period of reading clinic experiences.

Tables XI and XII show the significance of the changes in self-concept means for the experimental and control groups.

TABLE XI
SIGNIFICANCE OF THE CHANGES IN SELF-CONCEPT
MEANS OF THE CONTROL GROUP

Self-Concept Aspects	Initial Test Mean	Retest Mean	SE _{Diff}	<u>t</u>	P
Personal self-concept	49.6	52.3	.93	2.80	<.01
Social self-concept	53.4	53.5	1.05	.10	>.10 NS
Total self-concept	103.0	105.8	1.67	1.62	>.10 NS

TABLE XII
SIGNIFICANCE OF THE CHANGES IN SELF-CONCEPT
MEANS OF THE EXPERIMENTAL GROUP

Self-Concept Aspects	Initial Test Mean	Retest Mean	SE _{Diff}	<u>t</u>	P
Personal self-concept	49.75	55.00	.90	5.25	<.001
Social self-concept	54.35	58.08	1.08	3.46	<.001
Total self-concept	104.10	113.08	1.89	4.76	<.001

The initial test and retest means for the group in the three aspects of self-concept appear in columns two and three, respectively. The mean gain of 2.7 in personal self-concept for the control group proved to be statistically significant (t of 2.80) at a P=.01. However, no

significant difference was found for this group's mean changes in social or total self-concept at the required level of significance of .05, or even at $P=.10$. The changes for all three aspects of self-concept were in the direction of higher self-concept levels on the retests.

Significant differences between the initial test and retest means for personal, social, and total self-concept of the experimental group were revealed at a $P=.001$. The t of 5.25 for the mean change in personal self-concept was far greater than the required t of 2.00 at the .05 level of significance, or even greater than the required t of about 3.45 at the $P=.001$. The same was found to be true for the t of 3.46 for the mean change in social self-concept and for the t of 4.76 for the mean change in total self-concept. These changes were in the direction of increased self-concept levels for all three aspects.

Table XIII shows the significance of the differences between the mean changes in self-concept levels of the two groups. Fisher's t technique was statistically applied to the differences of the mean differences of personal, social, and total self-concept scores of initial tests and retests of the two groups.

TABLE XIII

SIGNIFICANCE OF THE DIFFERENCES BETWEEN THE MEAN CHANGES
IN SELF-CONCEPT LEVELS OF THE EXPERIMENTAL
AND CONTROL GROUPS

Self-Concept Aspects	M_{DC}	M_{DC}	SE_{Diff}	\underline{t}	P
Personal self-concept	2.62	5.25	1.395	1.885	>.05 NS
Social self-concept	.11	3.73	1.641	2.212	<.05
Total self-concept	2.74	8.98	2.727	2.285	<.05

No significant difference at $P=.05$ was found between the mean changes of the groups in personal self-concept; the \underline{t} of 1.885 was not sufficient to meet the required \underline{t} of 2.00. However, the \underline{t} of 2.212 for the difference in mean changes of the groups for social self-concept and the \underline{t} of 2.285 for the difference in mean changes of the groups for total self-concept were high enough to meet the critical \underline{t} requirement at the .05 level of significance. All changes in concept levels were in the direction of higher ones for the experimental group.

Correlations of the Experimental Group's Changes in
Reading Levels with Its Changes in
Levels of Self-Concept

The last hypothesis to be tested in this study read:
Changes in levels of reading comprehension, reading vocabulary, and total reading skills, associated with experiences

in a clinical remedial-reading program, are related to corresponding changes in the levels of self-concept. To relate the amount of changes in reading levels to the amount of changes in personal, social, and total self-concept levels of the experimental group, the difference scores (derived from scores made on initial tests and retests of self-concept) were correlated with the difference reading grade placement score deviations from actual grade placements (derived from initial test and retest data).

Pearson's product moment coefficients of correlation were computed for the same aspects of self-concept and reading that were used in the testing of the first hypothesis. This procedure was repeated for the control group for comparative purposes.

Tables XIV and XV show these correlations of changes in reading levels with changes in self-concept levels of the two groups. The correlations for the experimental group were all low but positive, ranging from .082 (for correlation of changes in reading vocabulary level with changes in personal self-concept level) to .238 (for correlation of changes in reading comprehension level with changes in personal self-concept level). The latter correlation was the only one that met the .05 level required for a significant correlation of .232 for a df of 70 (3, p. 231).

TABLE XIV

CORRELATIONS OF THE EXPERIMENTAL GROUP'S CHANGES IN READING LEVELS WITH ITS CHANGES IN SELF-CONCEPT LEVELS IN TERMS OF DIFFERENCES IN READING GRADE PLACEMENT DEVIATIONS FROM ACTUAL GRADE PLACEMENTS AND DIFFERENCES IN SELF-CONCEPT SCORES MADE ON INITIAL TESTS AND RETESTS

Changes in Reading Levels	Changes in Levels of Self-Concept		
	Personal Self-Concept	Social Self-Concept	Total Self-Concept
Reading vocabulary	.082	.131	.098
Reading comprehension	.238	.157	.217
Total reading	.202	.181	.199

TABLE XV

CORRELATIONS OF THE CONTROL GROUP'S CHANGES IN READING LEVELS WITH ITS CHANGES IN SELF-CONCEPT LEVELS IN TERMS OF DIFFERENCES IN READING GRADE PLACEMENT DEVIATIONS FROM ACTUAL GRADE PLACEMENTS AND DIFFERENCES IN SELF-CONCEPT SCORES MADE ON INITIAL TESTS AND RETESTS

Changes in Reading Levels	Changes in Levels of Self-Concept		
	Personal Self-Concept	Social Self-Concept	Total Self-Concept
Reading vocabulary	.018	-.166	-.075
Reading comprehension	.108	-.056	.069
Total reading	.104	-.183	-.019

Changes in total reading level with changes in total self-concept level correlated at .199. The correlations for these changes of the control group ran somewhat lower, clustering close to zero correlation and ranging from $-.183$ to $.108$. Changes in total reading level with total self-concept level correlated at $-.019$.

Findings of the Study

Major Findings

A summary of an analysis of the statistical treatment of the data is presented here as major findings of the investigation. Correlations of all three aspects of self-concept levels with all three aspects of reading achievement for both groups on initial tests were of a low positive nature. Those of the experimental group were somewhat higher, with the exceptions of correlations of:

- (a) personal self-concept with vocabulary achievement,
- (b) total self-concept with vocabulary achievement, and
- (c) personal self-concept with total reading. The correlations of the latter two were practically the same as those for the experimental group. All coefficients of correlation of both groups, except two of the control group, met the critical requirement for significance at the $.05$ level.

No significant differences were found between the initial test self-concept means of the experimental and control groups at $P=.10$.

The mean gain in personal self-concept for the control group proved to be statistically significant at $P=.01$ with a $\underline{t}=2.80$. The mean gains in social self-concept and in total self-concept were not considered significant at $P=.10$ with \underline{t} 's of .10 and 1.62, respectively. Changes in all three aspects of self-concept means were found to be significant at $P=.001$; \underline{t} for gain in personal self-concept was 5.25, \underline{t} for gain in social self-concept was 3.46, and \underline{t} for gain in total self-concept was 4.76. At the 5 per cent significance level, no significant difference was detected between the mean changes in the personal self-concept of the two groups. However, the gain of the experimental group over the control group was fairly large ($\underline{t}=1.885$, which was not quite enough to meet the critical requirement of a \underline{t} of 2.000 at the .05 level of significance). Attention is called to the significant change in personal self-concept levels of the control group on initial tests and retests (\underline{t} of 2.80 at $P=.01$). Even though the experimental group had a \underline{t} of 5.25, which was a significant difference in the personal self-concept levels on initial tests and retests at a $P=.001$, this was not quite high enough to make a \underline{t} of 2.000

required to meet the critical test of a significant difference between the mean changes in this aspect of self-concept of the two groups.

All changes in the correlations of the three reading aspects with all three of the aspects of self-concept of the experimental group were low positive. These correlations of the control group were somewhat lower in each case and clustering around zero correlation with some low negative correlations. The coefficient of correlation for the experimental group's changes in personal self-concept level with its changes in levels of reading comprehension was the only one of either group to meet the critical requirement for significance at the .05 level.

Some Incidental Findings

Some minor findings became apparent during this investigation:

(a) Many reading clinic pupils had low language factors intelligence, making it necessary for them to possess much higher non-language or performance intelligence in order to meet the requirement of approximately 100 total factors intelligence quotient.

(b) No reading clinic pupils were judged to be in the lower quartile for socio-economic status. Lack of parental values for education, broken homes, and lack of

transportation to the clinics might have been some of the contributing factors to this condition.

(c) The reading clinic pupils made significantly higher school readiness percentiles when they started to school, but they failed to do as well as the control group in reading and spelling achievement in later elementary school years. The experimental group was slightly better in arithmetic than was the control group.

(d) For the experimental group, there was a significant difference between the language or verbal factors and between the total or full-scale intelligence scores made on the group and individual mental maturity tests. The performance scores ran lower on the individual test, but those for verbal and full-scale intelligence ran higher than those on the group test. Thus, it would appear that both individual and group tests are useful instruments for gaining information about the reading clinic pupils' mental maturity factors.

(e) The group test of reading ability (like the group test of intelligence) may serve as a screening instrument for possible reading clinic pupils. A significant difference was found between the means of the individual and group reading tests for comprehension and total reading levels. However, this is not quite a fair comparison,

since the group test has the factor of speed built into it and the individual test has a separate score for this factor.

(f) The question has often been raised, "Are the schools teaching reading skills?" It appears that the schools of the school system selected for this study are teaching reading skills effectively, if the control group was a typical population (a fact that was not established in this study), since it was operating slightly above the national norms for all three aspects of reading measured on the initial tests. The experimental group did more poorly in vocabulary than they did in comprehension on initial tests.

(g) Work in word attack skills and use of low vocabulary-high interest reading materials were recommended for many of the reading clinic pupils.

(h) On initial testing, several of the reading clinic pupils were not operating on a total reading level of two or more years below the national norms for the group reading test. However, these boys were not admitted to the clinics on the basis of scores made on this test; they were admitted on the basis of individual test scores. The mean difference between the individual test grade placement and the actual grade placement ran much lower (-1.92) than those of the group test (-1.29).

(i) The reading clinic pupils made significant gains over the control group in all aspects of reading tested. The null hypothesis was rejected at $P=.001$ with t 's of 4.41 and 4.45 for difference between the two groups' mean gains in comprehension and total reading levels, respectively. It was rejected at $P=.01$ with a t of 2.76 for the difference between the two groups' mean gains in reading vocabulary levels. All gains were in the direction of higher ones for the experimental group.

(j) Nearly all of the children in the reading clinic were boys. It has been hypothesized that the elementary school classrooms with women teachers provide fewer opportunities for the boys to achieve proper self-concepts than they do for the girls (2, p. 228).

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CHAPTER V

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Summary of the Data

This study attempted to determine some relations between changes in reading skills and changes in certain selected aspects of self-concept accompanying a clinical remedial-reading program for elementary school boys with low reading ability and reasonably normal intelligence. Solution to the problem was sought through the testing of four hypotheses: (a) For children with approximately normal and equal language factors of intelligence, levels of certain personal and social aspects of self-concept are associated with levels of reading vocabulary, comprehension, and total reading skills. (b) For children with approximately normal and equal language factors of intelligence, there is a significant difference between the levels of self-concept of pupils with persistent reading problems and the levels of self-concept of pupils with reasonably normal reading abilities. (c) Changes in the levels of certain personal and social aspects of self-concept are associated with experiences in a clinical remedial-reading program. (d) Changes in the levels of reading vocabulary,

reading comprehension, and total reading skills, associated with experiences in a clinical remedial-reading program, are related to corresponding changes in the levels of self-concept.

The background and significance of this kind of study were pointed out; some values of the self-concept as a construct to be used in the investigation of psychological factors associated with reading achievement were explained. A balanced integration of individual remedial-reading instruction and therapeutic guidance and counseling in personality adjustment was suggested for remedial-reading clinics. This interdisciplinary case study approach was based on organismic, Gestalt, and psychoanalytic schools' considerations for covert feelings and other whole characteristics of the learner and the learning situation; yet, the principles of mechanistic learning of reading skills were not ignored.

The experimental population of this study was composed of seventy-two reasonably normal white boys of grades four, five, six, and seven of a large southwestern city. These boys were operating on a level of approximately two years below national grade placement norms for total reading skills. They were reasonably free from physical or intellectual defects; their problem was largely one of reading disability. A control group was formed by matching each

experimental subject with another pupil of the same school system, sex, and grade and of approximately the same chronological age and language factors intelligence quotient.

The California Test of Personality and the Reading Test of the California Achievement Tests were administered to both groups. After approximately seventeen weeks of school (which included two or three days per week of individualized clinical instruction for the experimental group), retests in reading achievement and self-concept were administered to the experimental and control groups. Changes in reading levels and in self-concept levels were determined for both of these groups.

Descriptive information was obtained from (a) cumulative records, (b) psychological reports, and (c) reports and records of teachers, principals, clinicians, and parents. The two groups were considered comparable in practically all factors except non-language and total factors intelligence, grades repeated, school readiness, and reading and spelling grade placement deviations from actual grade placements.

The tenability of the first two hypotheses was determined from the initial test data of self-concept scores and reading grade placement deviations from actual grade placements of both groups. The tenability of the last two

hypotheses was computed from the differences in reading levels and self-concept levels of the groups' initial test and retest data. Pearson's product moment coefficients of correlation were statistically computed from the data to check the tenability of the first and fourth hypotheses. Fisher's t technique was used in computing the significance of the difference between the two groups' means for reading levels and self-concept levels.

Conclusions

The statistical findings of this investigation led to several conclusions, which are considered applicable to the subjects of this investigation or to comparable groups operating under the limitations of the study:

(a) For boys with approximately normal and equal language factors of intelligence, there is a significant positive relationship between these levels of self-concept and reading:

- (1) Vocabulary and personal self-concept
- (2) Comprehension and personal self-concept
- (3) Total reading skills and personal self-concept
- (4) Vocabulary and social self-concept
- (5) Comprehension and social self-concept
- (6) Total reading skills and social self-concept
- (7) Vocabulary and total self-concept

(8) Comprehension and total self-concept

(9) Total reading skills and total self-concept.

These correlations for both experimental and control groups were rather low, ranging from .202 to .370. Correlation of total reading skills with total self-concept was .319 for the control group and .359 for the experimental group. (See Tables VIII and IX.) All except two of these correlations met critical requirements for significance.

(b) For boys with approximately normal and equal language factors of intelligence, no significant difference was found to exist between the levels of self-concept of pupils with persistent reading problems and the levels of self-concept of pupils with reasonably normal reading abilities. The null hypothesis was accepted at a level of significance greater than .10 for the differences between the two groups' means for personal, social, and total self-concepts. (See Table X.)

(c) Changes in social self-concept levels and changes in total self-concept levels seem to be positively associated with experiences in a clinical remedial-reading program. Changes in personal self-concept levels do not appear to be significantly associated with these experiences. The null hypothesis was accepted at a level greater than .001 for the significance of the mean changes in personal, social, and total self-concept of the experimental

group. (See Table XII.) The null hypothesis was rejected at a level less than .10 for the significance of the mean changes in social and total self-concept levels of the control group; however, it was accepted at a P greater than .01 for this group's significance of the mean change in personal self-concept level. (See Table XI.) The t of 1.885 was not quite large enough to reject the null hypothesis at $P=.05$ for the significance of the difference between the mean changes in the personal self-concept levels of the two groups; however, the null hypothesis was rejected at this level for the significance of the difference between the mean changes in the levels of social self-concept of the two groups. This was also true for the significance of the difference between the mean changes in total self-concept levels of the experimental and control groups. (See Table XIII.)

(d) Changes in the levels of reading comprehension, reading vocabulary, and total reading skills, associated with experiences in a clinical remedial-reading program, are each positively (but not significantly) related to corresponding changes in the levels of personal, social, and total self-concept. The only significant correlation was a .238 between changes in reading comprehension level and changes in personal self-concept level of the experimental group. In each comparison of correlations of the

two groups' changes in reading levels with their changes in self-concept levels, those for the experimental group were higher. These correlations for the control group ran much closer to zero, some being of a negative nature. Correlation of the experimental group's change in total reading levels with its change in total self-concept levels was .199; this correlation for the control group was $-.019$.

Recommendations

The findings of this investigation seem to point to the vital need for proper positive self-concepts in each reader. This in turn may suggest to the school administrators and teachers some implications for education:

(a) Provisions should be made in each child's curriculum for opportunities to build up desirable self-feelings and self-attitudes through experiences in group therapy, play therapy, non-directive counseling, child-centered quality teaching, and other permissive situations free from undue pressures, in order to provide encouragement of pupil initiative and self-help.

(b) Perhaps some instrument or other method could be devised for identifying (early in the primary grades) the children with poor self-concepts, which may relate with the reading problems discovered in the middle grades.

(c) Teachers and reading clinicians might receive more definite training in therapeutic guidance in personality

adjustment as well as in the correction of mechanical difficulties encountered in reading. Empathic regard for rapport and the covert feelings of the learner seem to be very important parts of the teaching-learning situation.

(d) Perhaps this investigation sheds some light on the values of a remedial-reading clinic which attempts to blend reading instruction with therapeutic counseling. A secondary question was raised in this study: "Is separate psychotherapy necessary or can it be combined simultaneously with remedial-reading instruction?" There was no attempt to check statistically any hypothesis regarding this question. However, gains in both reading levels and self-concept levels of the reading clinic pupils were much better than expectations indicated by the control group's performances and national norms for the instruments used.

(e) More men teachers in the elementary schools might help boys to form more masculine self-concepts through patterns of behavior and mores.

The relationship of the various aspects of self-concept with learning should be viewed as an on-going process. Follow-up studies in this area should be made periodically to help determine the exact extent and nature of this relationship. Some suggested studies for further research are:

(a) Studies of the relatedness of self-concepts with word-attack skills, oral reading skills, parental pressures, levels of aspiration, social roles, and school readiness.

(b) Studies of self-concepts of pupils of special education classes, including physically handicapped and superior and inferior intellectual groups.

Application of several of the self-concept instruments, including Q-sorts, paper-and-pencil tests, parents' and teachers' observations of changes in self-concepts, and the like could be utilized in such studies.

APPENDIX

INSTRUMENTS USED FOR RECORDING DATA

DESCRIPTIVE DATA SHEET

Pupil: _____ School: _____ Grade: _____ Birthday: _____

HOME BACKGROUND

Father's Occupation: _____ Social Status: _____

Mother Works? _____ Number of Siblings: _____ Other Adults in Home: _____

Step-parent or Guardian? _____ Broken Home? _____

HEALTH RECORD

General Health: _____ Illnesses: _____

Physical Defects: _____ Accidents: _____

Nervous Symptoms: _____ Coordination: _____

Vision: _____ Hearing: _____ Speech: _____ Other: _____

SCHOOL RECORD

Grades Skipped: _____ Grades Repeated: _____ Grades Summary: _____

School Readiness: Metropolitan Test: _____ %-tile. Test Date: _____

Behavior:

California Achievement Test Grade Placements: Test Date: _____

Reading: _____ Arithmetic: _____ Spelling: _____

Initial Test on Reading: Date of Test: _____

Vocabulary: _____ Comprehension: _____ Total: _____

Re-test on Reading: Date of Test: _____

Vocabulary: _____ Comprehension: _____ Total: _____

Gates Reading Survey: Date of Test: _____

Vocabulary: _____ Comprehension: _____ Speed: _____ Total: _____

PSYCHOLOGICAL DATA

I.Q.: California Test of Mental Maturity: Date of Test: _____

Language: _____ Non-language: _____ Total: _____

Wechsler Intelligence Scale for Children: Test Date: _____

Verbal: _____ Performance: _____ Full Scale: _____

Personality: California Test of Personality:

Initial Test: Date of Test: _____

Personal: _____ Social: _____ Total: _____

Re-test: Date of Test: _____

Personal: _____ Social: _____ Total: _____

Other Tests of Personality: Date of Tests: _____

READING CLINIC DATA FOR EXPERIMENTAL GROUP

Reading Clinic: _____ Date of Admission: _____

Summary and Recommendations of Staffing: _____

Interests: _____	Date: _____
Materials Read: _____	Date: _____
Anecdotal Records: _____	Date: _____
_____	Date: _____

PARENTS' INFORMATION SHEET

Dear Parent:

It is the desire of our psychologists to have the most complete picture possible of your child in order to better understand the problem. This questionnaire will help you give us the information we need to be of as much assistance as possible.

Name of child _____ Sex _____ Age _____

Date of birth _____ Race _____

School _____ Grade _____

Father _____ Occupation _____ Address _____

Mother _____ Occupation _____ Address _____

Home Phone _____ Bus. Phone _____
Mother / Father Mother / Father

Parents living together _____ Parents separated _____

Parents divorced _____ *

If parents are separated or divorced, when? _____

List by name the members of your family in the order of their age, beginning with the oldest parent. (Give sex of children.)

<u>MEMBER</u>	<u>AGE</u>	<u>BOY OR GIRL</u>
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

*If divorced, who has custody of the children? _____

MEDICAL AND DEVELOPMENT HISTORY

This is a very important section of our study of your youngster. The information you furnish in this area, like all the rest, is held in strictest confidence. Medical history material will be reviewed by the physician in charge of our School Health Department.

Please answer in your own words in the blanks provided.

My child's physician's name is Dr. _____
and his office is located at _____.

My child was born after _____ months pregnancy. During the pregnancy the mother's health was _____
The labor lasted for _____ hours. My doctor told me that the delivery was _____
My child's weight at birth was _____ pounds _____ ounces
and was: bottle fed _____
breast fed _____
As far as feeding problems were concerned, my child _____

Weaning took place at the age of _____ months. Weaning my child was _____

Toilet training for my child was _____
and took place at the age of _____ months.

As far as illness is concerned, my child (has _____ had
(has not _____
high fevers that lasted for some time. This high fever was
at the age of _____ and the disease was diag-
(years) (months)
nosed as _____.

As far as serious accidents (falls, burns, cuts, broken bones, etc.) are concerned, my child _____
(has convulsions or seizures or spells _____
My child)
(has never had seizures or convulsions or spells _____
The latest physical examination was made by Dr. _____ / Date
and revealed _____

My child's vision is _____ hearing is _____
speech is _____

My child sat up unsupported at _____ months
moved about on floor at _____ "
walked alone at _____ "
initiated speech sounds at _____ "
began to name objects at _____ "
began to feed self at _____ "

I. AT HOME:

Please check in the blank spaces provided the statements below that describe your child best.

When playing my child:

_____ Likes best to play with younger children
 _____ With older children
 _____ With those his own age

If he could, he would

_____ Like to have many playmates
 _____ Just a few
 _____ Likes to play alone
 _____ Likes to play with just one other child

My child likes to play with Boys _____ Girls _____ or both
 about the
 same _____

My child seems to enjoy most those games that:

_____ Are rough
 _____ Are noisy
 _____ Are quiet
 _____ Require little physical activity
 _____ Have very definite rules
 _____ Require a great deal of make-believe

My child, when losing a game,

_____ Almost always loses his temper
 _____ Keeps right on playing
 _____ Works even harder
 _____ Seems to "give-up"
 _____ Usually blames someone or something for the
 loss
 _____ Gets discouraged and wants to quit

My child likes:

_____ To play at home
 _____ At someone else's house
 _____ To have grown-ups watch the play
 _____ To "make rules" and decide how things shall go
 _____ For someone else to make the decisions

As far as punishment for my child is concerned, I really
 feel that (please fill in using your own words): _____

As far as eating is concerned, my child:

_____ Has a good appetite
 _____ Is never hungry at meals, but wants to eat
 between meals

_____ Just wants certain foods and raises a fuss
 when a more balanced meal is suggested
 _____ Just wants sweets--candy, cookies
 _____ Has to be punished before he will eat a good
 meal
 _____ Is no problem as far as diet is concerned
 _____ Eats too much
 _____ Enjoys eating with the family

When it comes to sleeping, my child

_____ Sleeps soundly
 _____ Sleeps poorly
 _____ Hates to go to bed
 _____ Has nightmares
 _____ Walks in sleep
 _____ Cries and talks in sleep
 _____ Wets the bed sometimes
 _____ Wets the bed often (more than once a week)

When it comes to talking about problems, worries, fears,
etc., my child:

_____ Prodding is necessary
 _____ Will talk freely
 _____ Will keep his thoughts to himself
 _____ Talks more freely with mother
 _____ Confides more with (insert name of relation-
 ship _____)

When punishment is necessary, it is administered:

_____ Most often by mother
 _____ Most often by father
 _____ By whipping or spanking
 _____ By shaming
 _____ By sending out of room or away from family
 group
 _____ By stopping his playing with other children
 _____ By cutting off his allowance
 _____ By denial of privileges, please explain _____

With members of the family, my child:

Gets along best with _____
 (Insert name and relationship)
 Feels more at ease with (Use your own words):

Seems to get upset most when: _____

With respect to my child's difficulties according to my ideas the main problems are (Please use your own words):

1. _____
2. _____
3. _____

Other people tell me the main problems are:

1. _____
2. _____
3. _____

II. AT SCHOOL

My child started school in _____
at the age of _____, _____
Years Months

The following schools have been attended by my child:

<u>Name of School</u>	<u>Address (Name of city)</u>	<u>GRADE</u>
_____	_____	_____
_____	_____	_____
_____	_____	_____

My child is now in _____ and has _____
Grade (Name of teacher)
for his homeroom teacher. Best school work is done in the
following:

Reading _____ Arithmetic _____ Writing _____ Spelling _____ Art _____
Other _____

My child has no trouble with school work in _____

Homework for my child:

- _____ Is done with no bother or not too much trouble
 _____ Is a source of some unhappiness and trouble
 _____ Is something I have to force him/her to do
 _____ Is something father helps with most
 _____ Is something mother helps with most

Frankly, my feelings about homework for my child is (use your own words):

I think my child would like school if _____

My child has had or is still having problems with:

	<u>Has</u>	<u>Has Had</u>		<u>Has</u>	<u>Has Had</u>
Thumb-sucking	___	___	Excessive		
Finger-sucking	___	___	crying	___	___
Nail-biting	___	___	Feelings		
Restlessness	___	___	easily		
Jerking move- ments	___	___	hurt	___	___
Day-dreaming	___	___	Running away		
Fighting	___	___	from home	___	___
Fear of dark	___	___	Taking		
Others running	___	___	things	___	___
over him	___	___	Bullying	___	___
Exaggerating	___	___	Complaints		
or telling			of sick-		
lies	___	___	ness or		
Excessive	___	___	pains	___	___
demands	___	___	Always		
Temper tantrums	___	___	hungry	___	___

Has your child ever had contact with the police or the Juvenile Authorities?

YES NO

If so, when and why? _____

Among the relatives there have been some who have had difficulties with:

	<u>Relationship to your child</u>
Stammering or stuttering	_____
"SPELLS," convulsions	_____
Explosive temper	_____
Extreme shyness	_____
Mental retardation	_____
Chronic alcoholism	_____
Treatment in Mental Institution	_____
Drug Addiction	_____

Filled out by _____
Relation to child _____

Date _____

(Any additional information you feel would be helpful to us, please write on another sheet of paper and enclose with this questionnaire)

PRINCIPAL'S REFERRAL FOR INDIVIDUAL STUDY

Name of Pupil _____ Birthdate: Month _____
Day _____ Year _____

Address _____ Parent _____ Telephone: _____
Business _____
Home _____

School _____ Grade _____ Race _____ Sex _____

Referral discussed with parent? Yes ___ No ___ If answer is
yes, who discussed the referral? _____

Referred to: Research Department _____
Special Education Department _____

Reason for referral:

Vision _____	Suspected Mental Retardation _____
Hearing _____	Lack of adequate academic _____
Speech _____	progress _____
Orthopedic _____	areas: _____
Reading _____	Emotional _____
Behavior _____	Other _____

Pertinent problem(s) necessitating referral: _____

1. Health Information:

Vision: R ___ L ___ Date Tested _____ Comment _____
Hearing: R ___ L ___ Date Tested _____ Comment _____
Audiogram made: Yes ___ No ___ Test _____

Previous Illnesses:

Age	Kind	Comment

History of convulsive seizures: _____

Heart condition: _____

Significant Physical deviations: _____

Comment: _____

2. Home Data:

Occupation of father _____
 Occupation of mother _____
 Number of adults living in home _____
 Number brothers _____ Number sisters _____

3. School Data:

Actual School Placement (grade) _____
 Achievement Placement: Reading _____
 Arithmetic _____
 Spelling _____
 Summary of grades appearing on cumulative card _____
 Grades repeated: _____ Grades skipped: _____
 Behavior: _____

Comments of Teacher(s): _____

Salient facts which should be known about this child:

Have the services of the Visiting Teacher Division
 been requested in this case? Yes _____ No _____

Test information:

Test Form	Date Given	CA	MA	IQ	Grade Placement

Comments:

Principal's Signature _____

Date _____

- (4) Psychomotor activity (motor manifestations of nervousness, etc.)
- (5) Orientation: Personal Spatial Temporal
- (6) SENSORY: a. Vision:
 General acuity:
 Color:
 Form:
 Reversals:
 Other visual disturbances:
- (7) EXPRESSIVE:
 a. Speech, language:
 b. Visuomotor coordination
- (8) INTELLECTUAL FUNCTIONING (describe qualitatively, in detail):
- (9) PERSONALITY:
- (10) SUMMARY:
- (11) RECOMMENDATIONS:

READING CLINIC'S
ENROLLMENT INFORMATION SHEET

Name _____ School _____
Parent's Name _____ Address _____ Phone _____
Age _____ Birthday _____ Grade Placement _____
Date of enrollment _____ Teacher _____

School Record:

Kindergarten _____
Age entered first grade _____
Failures _____

Health History:

Interests:

Reading difficulty as parent sees it:

Other comments:

Enrolled by: _____

READING CLINIC'S
SUMMARY OF TESTS

NAME OF CHILD _____

PHYSICAL REPORT:

Vision checked: _____

Hearing checked: _____

PSYCHOLOGICAL REPORT:

Date	Test	Results

READING TESTS:

	Date	Form	Score	Date	Form	Score
Durrell-Sullivan Language Capacity						
Grade Placement						
Gates Diagnostic						
<u>Oral Reading</u>						
<u>Reversal</u>						
<u>Phrase Perception</u>						
<u>Word Perception</u>						
<u>Spelling</u>						
<u>Vis. Perception Techniques</u>						
<u>Auditory Techniques</u>						

Comments:

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Letters

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