CHILDREN'S UNDERSTANDING OF EMOTIONALLY, MENTALLY, AND PHYSICALLY HANDICAPPED BEHAVIOURS AND RELATED MENTAL HEALTH CONCEPTS:
A DEVELOPMENTAL STUDY

by

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ABSTRACT

Ninety children from grades 2, 4 and 6 responded to a multiple choice Mental Health Concepts Questionnaire and to interview questions concerning characters in cartoon strips who displayed mentally retarded, crippled, neurotic, and autistic behaviour. All children were administered the Peabody Picture Vocabulary Test (PPVT).

Questionnaire special response scales and interview comprehension scores were analysed by 3-level 1-way ANOVAs; comprehension scores were also analysed by 1-way repeated measures ANOVAs. Qualitative interview data were coded and then analysed by ANOVAs of proportions. Favorability data for each character were analysed by a 3-way between-within ANOVA. Pearson correlations revealed significant relationships among total questionnaire scores, comprehension scores and PPVT scores at all grade levels.

Six questionnaire special response scales suggested several patterns. Grade 2 children tended to associate mental health concepts with medical terms and to believe conditions could change with effort more than higher grades did. With age, children were less likely to perceive behaviour as attention-seeking and more likely to associate behaviour with familial factors. Grade 4 children associated retardation and mental illness with inability to change more than children in the other grades did. Increasingly with age, children associated terms which include the word "mental" with retardation.

Interviews elicited responses to questions on etiology, control and change for the four behaviours. Children shifted from believing that behaviours were self-induced to perceiving behaviours as reflections of environmental influences. Grade 2 children believed the characters would outgrow their behaviours or could change their behaviours through effort. Grade 4
children, more than children in the other grades, tended to cite the role of environmentally-initiated help in facilitating change. Effort, self-reflection and environmental reinforcement were major channels of change suggested by grade 6 children. Autistic and neurotic characters were rated less favorably than the crippled or retarded characters.

Results were considered within a social-cognitive developmental framework. Grade differences reflected the young child's cognitive decentering and increasing exposure to social attitudes. By grade 6, many children have adopted prevalent adult attitudes toward emotionally disturbed behaviour.
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INTRODUCTION

Public Attitudes Toward Mental Illness

For centuries, the mentally ill have been the outcasts of society (Foucault, 1965; Rosen, 1968). As Foucault (1965) has eloquently noted, in present society, the mentally ill have assumed the position which the lepers occupied in the Middle Ages as victims of unwarranted disgust. Since the 1950s, many investigators have been concerned with public attitudes toward the mentally ill (e.g., Bentinck, 1967; Clark & Binks, 1966; Cumming & Cumming, 1957; Lemkau & Crocetti, 1962; Nunnally, 1961; Olmsted & Durham, 1976). Studies have evaluated attitudes of the general public, of mental health personnel, of relatives of mental patients, and of patients themselves. Reviews of these studies, however, do not share the same conclusions. Crocetti, Spiro, Lemkau and Siassi (1972) asserted that "the man in the street" can identify mental illness, is "optimistic" about the prognosis for a disturbed individual, and "does not place a sizable distance between himself and those labeled mentally ill (p. 3)". Other reviewers, and the more prevalent findings for the general public, have stressed that individuals who manifest bizarre behaviour or who have been labeled mentally ill are socially rejected (Rabkin, 1972; Sarbin & Mancuso, 1972).

Although fifteen years old, Nunnally's (1961) study of popular conceptions of mental illness represents the most extensive work in the field. His major findings have been repeatedly, though perhaps not consistently, supported. He found that while different subgroups of the population possessed varying degrees of information about mental illness, all groups, independently of age or education shared a generally negative attitude. Older individuals were better informed than younger individuals, and the well educated were better
informed than were the less educated. However, in comparing public attitudes toward mentally ill individuals ("a mental patient", "an insane woman", "a neurotic man") with their attitudes toward "normals" ("me", "average man", "my father"), Nunnally found that the mentally ill were rated as relatively "worthless", "dirty", "dangerous", "cold", "unpredictable", "insincere" and "foolish". In sum, "they are considered, unselectively, as being all things bad (Nunnally, 1961, p. 233)."

Although some authors believe the public now have greater tolerance for and understanding of mental illness than they did fifteen years ago (Crocetti et al., 1972; Halpert, 1969), a recent paper by Olmsted and Durham (1976) cited strong support for the generalizability of Nunnally's findings to the "general public" of today. Using the same semantic differential scales Nunnally had, Olmsted and Durham compared the responses of summer term college students in 1962 with those of summer term college students in 1971. Because the college students of 1962 had responded extremely similarly to the way in which Nunnally's "general public" had responded, the authors proposed that college students are influential representatives of the general public. The authors expected differences between the two college samples, considering the force of the mental health movement and a society of rapidly changing values between the years of 1962 and 1971. They found, however, that popular mental health attitudes had not changed over the nine year period, that both groups "unequivocally reject" individuals classed as mentally ill or insane. To explain this finding, the authors posited that "these attitudes are firmly anchored in a cultural belief system that is effectively transmitted from one generation to the next and is not very susceptible to modification by 'external' forces such as educational or promotional campaigns by experts (Olmsted & Durham, 1976, p. 43)."
Measurement of public attitudes toward mental illness represents a major problem contributing to the conflicting conclusions of reviewers. Crocetti et al. (1972), for example, reported a study by Lemkau and Crocetti (1962) in which individuals read vignettes describing psychotic behaviour. Fifty percent of those interviewed said they would be willing to room with the described person and fifty-one percent could imagine themselves "falling in love" with the described person. The use of these results to support a conclusion of positive attitudes toward mentally disturbed behaviour rests on two assumptions. First, it assumes that written descriptions of a paranoid or a simple schizophrenic accurately convey the disorder to the extent that a reader can genuinely imagine "falling in love" with the disturbed person. Second, it assumes that none of the traditional problems of self-report is operating (Wolff & Merrens, 1974).

An additional problem of attitude measurement is that all components of attitudes are seldom evaluated. Attitudes include cognitive components consisting of perceptual responses and beliefs, affective components reflected in sympathetic nervous system responses and emotional statements, and behavioural components expressed in overt actions (Triandis, 1971). Clearly, any study which explores only the cognitive or affective components of the attitude has ignored a component whose expression may be a more accurate indication of the attitude than that expressed in the self-report. Several investigators have noted that the correlation of self-report measures of attitudes and actions are often extremely low (Azrin et al., 1961; La Pierre, 1934; Wicker, 1969). The behavioural components of an attitude are often difficult to measure because the relationship between an individual's verbalized attitude and his or her behaviour is not always strong. Behaviour itself reflects, in addition to the attitude, the norms, habits and expectations of reinforcement perceived and experienced by the individual (Triandis, 1971). Therefore, overt
behaviours may or may not reflect an individual's attitude.

Public reactions to the mentally ill, expressed either in self-report or in behaviour, have major effects on detection, on diagnosis, and especially on therapeutic prognosis. Where mental illness is viewed as shameful, incurable or threatening, symptoms may be mislabeled and misunderstood, and persons designated as mentally ill may experience social rejection rather than support during critical periods. The disclosure that one has had previous "treatment for mental problems" has extremely damaging effects on many aspects of living such as moving into a neighbourhood (Farina, Thaw, Lovern & Mangone, 1974), obtaining employment, running for public office (Chase, 1973), voting and obtaining a driver's license.

Because public attitudes can play such a powerful role in the adjustment of the mentally ill individual, mental health workers should be concerned with modifying current concepts and reactions of the public. The relationship between knowledge and attitudes, however, is complex. Increased education cannot be equated with increased tolerance. Studies investigating the effects of academic instruction for adults upon changing negative attitudes have conflicting findings. While some found that questionnaire-measured attitudes did change with instruction (Costin & Kerr, 1962), others found no change or change in a negative direction (Cumming & Cumming, 1957; Freeman & Kassebaum, 1960). Nunnally (1961) determined that attitudes were somewhat more favorable toward the classic diagnostic categories such as "psychotic" or "neurotic" after individuals had been supplied with information regarding those labels, regardless of whether the information was correct or not. In her review article, Rabkin (1972) concluded that changes in attitudes appear to be due to factors unrelated to the content of the course, such as the instructor's attitude or the students' abilities or existing beliefs.
Many attitudes are ingrained in early childhood (Allport, 1954; Russell, 1956). The major focus of research specifically on children's attitudes has been in the study of prejudice. Investigators have found that at as early as three or four years of age, children begin to differentiate themselves from others and begin to acquire negative attitudes toward people who are "different" (Lambert & Klineberg, 1967; Porter, 1971). Scheff (1966) explicitly argued that stereotypes of mental illness are learned in early childhood and reinforced in countless subtle ways by parents, peers and the media. If, as Olmsted and Durham (1976) propose, these attitudes represent a stable system of cultural beliefs, they will become ingrained early in childhood and will be extraordinarily resistant to change. The formulation of these attitudes in young children, a specific component of the more general development of children's concepts of psychological causality, must be explored if societal reactions to mental health phenomena are to be modified.

Children's Concepts of Psychological Causality: Social and Cognitive Influences

Very few investigators have been concerned specifically with children's conceptions of psychological causality, although the development of social sensitivity in children is well researched. The general trend for social sensitivity to increase with age is both logical and well supported empirically (Borke, 1971; Burns & Cavey, 1957; Deutsch, 1974; Dymond, Hughes, & Raabe, 1952; Feshbach & Roe, 1968; Flapan, 1968; Flavell, 1974; Rothenberg, 1967, 1970). The more specific ability to explain the causes of behaviour in others has been studied developmentally by only a few researchers (Flapan, 1968, Whiteman, 1967).

Whiteman (1967) examined the relationship between the child's level of cognitive growth and her or his capacity to understand the psychological
motivation for behaviours. Using two groups of children, one pre-operational and the other operational, Whiteman read stories in which children's behaviour could be explained by psychoanalytic defense mechanisms. Consistent with Piaget's distinctions between the intuitive child and the concrete operational child, Whiteman found the older children capable of understanding and articulating rationales for the behaviours of the characters in the stories and demonstrating an insight of which the younger children were simply incapable.

In a study by Flapan (1968), children's abilities to describe and make inferences about the thoughts, feelings and interpersonal behaviour of characters in films were explored. She noted that, with increasing age, children shift from straightforward reporting and describing in situational terms to interpreting and inferring interpersonal perceptions and noting the psychological components of interpersonal behaviour. Secord and Peevers (1974) also discussed the developmental movement away from egocentric and toward more impersonal descriptions of others.

Only one study considers children's reactions to emotionally disturbed behaviour; this study did not ask children to explain the behaviour but rather evaluated children's reactions to "imaginary peers" on measures of attractiveness, social distance and perceived similarity to self (Novak, 1974). Novak concluded that by grade 4, children demonstrate the negative attitudes of adults toward emotionally disturbed behaviour.

Children, increasingly with age, are able to explain various aspects of normal behaviour, such as cause, responsibility or capacity to change. However, the identification of these aspects of disturbed behaviour is additionally complicated by the lack of correct information and the negative attitudes of adults in the child's environment who might help the child to understand the unusual behaviour. Two interacting developmental factors substantially shape
the child's emerging attitudes toward disturbed behaviour: the child's social
development, influenced by parents, peers and teachers, and the child's cog­
nitive development, primarily a naturally evolving sequence of stages.

Several theorists emphasize the importance of social experiences with
other people as the basis for the child's growing capacity to understand be­
(haviour (Secord & Peevers, 1974; Kerckhoff, 1970). Children's attitudes to­
ward behaviour of others is learned both from hearing the attitudes of parents,
teachers and other children and from direct contact with different kinds of
behaviours. The elementary school years mark the child's first exposure to
new authority figures and to large numbers of new children. School in general
represents a host of new behaviours and perspectives: peers use words such as
"retarded", "spaz" or "pervert" to label a disliked child; teachers label
acting-out or disturbed behaviour as "bad" or "attention-seeking"; parents
cautions children to avoid adults who behave peculiarly.

In addition to the largely social influences of the environment, the
child's cognitive development during this period affects his or her perceptions
of others. According to Piaget, the pre-operational child is egocentric and
conceives of the environment in terms based upon her or his immediate percep­
tual experience. Egocentrism is the child's confusion of his or her own point
of view with that of others, resulting in the assimilation of reality to the
child's own ego (Piaget, 1951). The pre-operational child's thought is intui­
tive. He or she cannot, for example, envision how a papier maché mountain
might look from a perspective other than his or her own, and although he or
she knows which is his or her own right hand, the child has difficulty deter­
mishing which is the right hand of an individual facing him or her. The ego­
centric child reduces other situations to her or his own point of view, uncon­
sciously distorting them. "Thus, both on the social and physical plane, he
is egocentric through ignorance of his own subjectivity (Piaget, 1950, p. 160). The pre-operational child's concepts of psychological causality for behaviour are more rigid and simple than those of a child only two years older who has begun to emerge from egocentric thought.

With the "thawing out", in Piaget's terms, of intuitive structures, the child acquires concrete operations, making the critical change from egocentrism to perspectivism. The child, no longer bound to the phenomenal state of events, can now coordinate different points of view into a system or group of objective relations. The absence of this coordinating capacity was the primary characteristic of the mental operations of the previous stage. In the physical world, the child can now consider multiple dimensions at the same time, exemplified in the ability to conserve. In the social world, the child can evaluate acts more on the basis of intentions or motives of the actor than on the ostensible consequences of the act.

The central factor characterizing the shift in mental capacities between these two stages is decenteration. Because different kinds of egocentrism—communicative, cognitive, role-taking and spatial—all decrease with age, a single decenteration factor has been suggested (Rubin, 1973). The thought of the pre-operational child is "centered", inflexible, incapable of the mental operations which permit an objectivity toward an event or object. The child who has acquired concrete operations can consider objects from several perspectives.

Role-taking, which relies upon both social and cognitive development, is a tool which allows children to understand the behaviour of others. The ability to role-play illustrates the concept of decentering in the child's structuring of his or her social world. To "put yourself in the other guy's shoes" is essentially a form of role-playing. Flavell (1968) suggested that
egocentrism is, in essence, the inability to take roles; communication with others is facilitated by the understanding derived from role-taking. With the observation that younger children are not able to role-play as well as older children, Feffer and his colleagues (1959, 1960, 1966) have posited balanced decentering as a factor in the cognitive development necessary for the child's structuring of both the physical and social world. Role-playing abilities emerge in children at approximately age eight or nine; this also appears to be the age when children's insight into the behaviour of others becomes dramatically more acute than that of younger children.

Although Piaget and his followers have recognized that children's social experiences are the major factors leading to decenteration and the decline of egocentrism, they have nevertheless underestimated the capacity of social experiences to influence the child's thought. Social experience, they have claimed, can be effective or influential only when the child is cognitively ready, on the verge of a new stage. Recently, authors have more directly pointed out the role of social experience in the decline of egocentrism (Looft, 1972; Rubin, 1973; Secord & Peevers, 1974).

Clearly, the social and cognitive factors are interactive in the development of attitudes toward mental health phenomena. Attitudes are not simply and directly introjected from the parent. Rather, societal attitudes represent part of the social order which the child perceives and understands according to her or his existing cognitive structures. The developmental changes in the child's cognitive structures which alter his or her conceptions of physical causality will also affect his or her understanding of psychological causality. The child's comprehension of disturbed behaviour, as a specific type of psychological causality, will also be influenced by the prevalent societal attitudes which she or he assimilates into her or his cognitive structures.
Other factors have been cited as significant in the child's growing interpersonal awareness. Some investigators have found that intelligence and interpersonal adjustment contribute to accurate social perceptions (Deutch, 1974; Rothenberg, 1970; Stuart, 1967); others have concluded that the emergence of interpersonal awareness is a function of development dependent on factors other than basic intelligence (Hamsher, 1971). Another author found that neither Piagetian level nor role-taking ability was a factor in children's interpersonal interpretations; only the child's grade level predicted responses (Mapley, 1975). Mapley found no relationship between Piagetian scores and the accuracy or inference with which children reported nonstereotypic behaviour from film sequences. More research is needed to determine the factors contributing to children's interpretations of behaviour. Before specifying the contributing influences to children's perceptions of emotionally disturbed behaviour, however, the perceptions themselves should be clarified.

A Preliminary Investigation

In a preliminary investigation of children's understanding of emotionally disturbed behaviour, children responded to three brief vignettes of disturbed behaviour (Maas, 1973). Each vignette illustrated a specific syndrome of disturbed behaviour as described by Phillips and Rabinovitch (1958). One syndrome, Avoidance of Others (AVOS) or psychotic behaviour, was characterized by withdrawal, suspicion, hallucinations, bizarre ideation and apathy. A second, Turning Against Others (TAO) or psychopathic behaviour, described an irresponsible, unpredictable, unkind person. Turning against Self (TAS) or neurotic behaviour, the third syndrome, included behaviours suggesting tension, anxiety, compulsions and psychosomatic ailments.

The subjects were sixty children, ten boys and ten girls from grades two, four and six; all were students at Swarthmore Elementary School, a sample
almost entirely upper middle class in social and economic background. The three vignettes were read to the children and responses were assessed in terms of concepts of cause, responsibility, change and favorability. General findings were as follows:

1. External, social explanations for disturbed behaviour or those referring to specific influences of family, friends and other people, increased dramatically with age. Averaging across all three vignettes, 5% of the reasons given by grade two children fell into this category as opposed to 82% of the reasons given by grade six children. At the same time, "internal explanations", those based on innate characteristics or on individual whim, declined markedly; 65% of the grade two children's responses were of this type, while 15% of the grade six children gave answers in this category.

2. Children's explanations of causes of behaviour became increasingly specific with age and older children offered increasingly complex, multicausal explanations.

3. The AVOS and TAS characters were seen as desiring to change their behaviour while the TAO character was seen as less likely to want to change.

4. Most children believed that all three characters could change their behaviour. When asked why the characters did not, in fact, change, grade two children tended to see the characters as "not trying hard enough" while older children pointed to the difficulty of changing ingrained habits. Younger children tended to appeal to sheer effort as a means for change, while older children recommended specific changes in the social environment, sometimes including securing professional psychiatric help.

5. Nineteen adjective pairs which children had ascribed to each character were factor analysed and clustered along four major dimensions which
accounted for 68.9% of the total variance. The four dimensions were labeled "social desirability", "social assets", "self assertiveness" and "well being". Factor scales composed of the highly loaded items for each factor were constructed and used as dependent variables in a series of analyses of variance. These analyses revealed a complex set of relationships among grade and sex of child, the character being rated, and the factor scales. Perhaps the most important qualitative finding was the tendency of younger children to stereotype the characters along a single evaluative dimension. Thus, for example, the TAO character was disliked and therefore thought to be stupid, poor, ugly and so on. Older children showed more complex, less stereotyped and more logical ratings.

The Present Study

This study attempts to determine developmental changes in children's concepts of mental health terms and in their interpretations of emotionally, mentally and physically handicapped behaviour. The specific questions this research seeks to answer are the following:

1. How do children at different ages define and conceptualize common mental health terms?

2. How do children's interpretations of autistic, neurotic, retarded and physically handicapped behaviours change during this age range? Specifically, what are children's beliefs at each age level about etiology, control and change for these behaviours?

3. How positively or negatively do children at the different age levels perceive the different classes of behaviour? That is, which classes of behaviour are judged more favorably and which age groups are more favorable in their evaluations?

4. Are the four classes of handicapped behaviour understood equally well
by children at each age level?

5. Is there a relationship between children's scores on a written questionnaire of mental health concepts and their verbal performance in an interview concerning attitudes toward handicapped behaviour? If a relationship does exist, it would suggest that familiarity with the mental health vocabulary also implies understanding of these classes of behaviour. If, on the other hand, a relationship does not exist, it would indicate that the child who knows about some mental health terms and concepts would not necessarily be able to express an understanding of handicapped behaviour, or vice versa.

6. How central a factor is general verbal intelligence in questionnaire-measured knowledge of mental health concepts and in interview-assessed attitudes toward handicapped behaviour?

Only the cognitive and affective components of children's attitudes toward mental health phenomena are evaluated. Ethical and practical considerations would make it impossible to create a situation in the school for the systematic observation and evaluation of the behavioural component. As in interviews with adults, social desirability may be operating in interviews with children, modifying their genuine attitudes. For this reason, the research focused more upon the cognitive components of the attitudes, the perceptions and beliefs, than upon the affective componentsswhich are more susceptible to distortion by social desirability factors. The purpose of this research is not to attribute attitudes directly to specific social experiences, cognitive levels, intelligence or any of the other factors which have been proposed as possibly related to children's perceptions of other people. At this stage of research in the area, the ways in which these attitudes might be related to cognitive and social developmental factors is only speculative.

To investigate the above questions, two instruments have been designed.
The first is a questionnaire, designed to measure the accuracy of children's knowledge of mental health concepts and to expose some of the incorrect concepts children possess. The second instrument is a series of cartoon strips, each depicting a handicapped child in school situations. Throughout the study, the term "handicapped" refers to all four classes of behaviour; the term "emotionally disturbed behaviours" refers only to the neurotic and autistic behaviours. The two behaviours generally not classified as emotionally disturbed, the retarded and the crippled behaviours, served as contrasting behaviours to the other two, although the children's reactions to each kind of behaviour were of interest.

A population of children from public schools would have been desirable. However, because the research concerned attitudes toward such a "sensitive" topic, the Vancouver School Board refused permission to conduct the research in the public schools. Consequently, subjects are from Catholic schools and from primarily middle-class Catholic homes. Children from grades two, four and six were selected to provide a range from relatively egocentric thought to concrete and sometimes formal thought. A pilot study suggested that six year olds, a group more likely to be truly egocentric in Piaget's terms, were too young to understand the task and respond appropriately.

Many investigators of children's changing interpretations of physical and social phenomena have used this age range because it appears to be a critically formative period in children's developing perspective of the world. Logically, children's attitudes toward handicapped behaviour would also develop during this period. In this study, the ways in which these attitudes change and begin to approximate those of adults in this society were explored.
METHOD

This section includes descriptions of (1) the subjects; (2) the instruments, including (a) the development, reliability and structure of the questionnaire, (b) the creation of the cartoon strips, (c) the adjective sheets and (d) the Peabody Picture Vocabulary Test (PPVT); (3) the procedure and (4) the scoring and analyses.

The experimenter or E refers to the author who conducted all the interviews and administered the questionnaires to grades 4 and 6 and to half of grade 2. The second experimenter, a fourth year undergraduate psychology student, administered all the PPVTs and the other half of the questionnaires to grade 2. This experimenter, who will be identified as the second experimenter, had been instructed in the administration of the PPVT and had practiced giving the test with supervision to nine children before beginning the testing in this research.

Subjects

Ninety children, fifteen boys and fifteen girls in each of grades 2, 4 and 6, comprised the testing group. Mean ages over both sexes were 7 years 7.6 months for grade 2, 9 years 5.8 months for grade 4, and 11 years 6.4 months for grade 6. Except for two Oriental children, two Canadian Indian children and one Pakistani child, all were Caucasian. Three of these minority children were in grade 4, one was in grade 2 and one in grade 6. All subjects were middle class children attending Our Lady of Perpetual Help or Immaculate Conception School, two Catholic schools in similar neighbourhoods in Vancouver, British Columbia, Canada. Each child who participated had returned a signed parent consent form (Appendix A).
Instruments

Mental Health Concepts Questionnaire

Development and Pilot Testing of the Pilot Questionnaire. A 44 item multiple-choice questionnaire (Appendix B) was designed to assess which mental health labels could be correctly defined by children at various age levels. The questionnaire was administered to a pre-pilot group of six children in each of grades 1, 2, 4, 6, and 7. All children were living in a neighbourhood of low-cost housing on the University of British Columbia endowment lands, and all children had parental permission to answer the questionnaire. Children in the upper three grades were able to respond to the questionnaire on their own; the experimenter (E) read the questionnaire to each child in grades 1 and 2 individually. All items on the questionnaire were either definitions or concerned with the etiology or treatment of mental disorders.

Any item which was either correctly or incorrectly answered by all children in the pre-pilot group was discarded and several items were reworded because children had found them confusing. A 57-item multiple-choice questionnaire (Appendix C) was then devised composed of three kinds of questions: (1) definitions of mental health labels (25 items), for example, "What does insane mean?" or "What is a psychologist?"; (2) aspects of mental health disorders such as etiology and treatment (16 items), for example, "How do most people become mentally ill?" or "If you knew someone who was mentally retarded and you wanted to help him, who would you send him to?"; (3) explanations of unlabeled neurotic or psychotic behaviour (16 items), for example, "A girl feels that everybody hates her and wants to hurt her, even though this is not true. Why does she feel that way?"

A pilot group of sixteen grade 2 children, thirty-two grade 4 children, and sixteen grade 6 children responded to the questionnaire. Eight of the
children from each grade level were students at Immaculate Conception School. The remaining children were obtained from a ride pool and babysitting list in a neighbourhood heavily populated with children. The experimenter contacted parents individually to obtain permission for children to respond to the questionnaire. None of these children, nor any of the pre-pilot children, participated further in any part of the study with the exception of eight grade 2 children who read the cartoon strips to determine whether the vocabulary and behaviours were comprehensible to them.

An item analysis of these results provided data for the selection of the items for the final questionnaire. The grade 4 children's responses were the basis for the item analysis, while the grade 2 and grade 6 children's responses were used to determine the presence of floor or ceiling effects respectively. The 37 items selected ranged in correlation with the total score from .20 to .87 with a mean of .48.

Reliability of the Final Questionnaire. The final 37 item questionnaire (Appendix D) consisted of 16 items of definitions of mental health diagnostic labels, 11 items concerned with aspects of behaviour disorders, and 10 items describing disturbed behaviours. Two professors of clinical psychology and 12 graduate students of clinical psychology answered the questionnaire to ensure that the answers designated "correct" were agreed upon by a group of "experts". On 35 of the items, all respondents agreed 100%. On one item (9), two graduate students disagreed with the other 12 respondents, and on one item (31), six students' answers disagreed with the answers of the majority. The latter item was discarded.

Two grade 2 teachers read the questionnaire to ensure that all words, except the diagnostic labels themselves, were known to grade 2 children.
The questionnaire was assessed for internal consistency using Cronbach's alpha coefficient. As presented in Table 1, the reliabilities, especially for grade 2, were low and may have been the result of a number of factors. First, a major problem in designing this instrument concerned the age range for which it was to be used. This necessitated including items covering a greater range of difficulty than is desirable which probably lowered the reliability, especially for grade two children. Two additional conditions contributed to the low reliabilities: the short length of the test and the lack of control over the individual child's incentive or effort. Although a longer pilot test might have made it possible to create a better final instrument, it would have been difficult, due to restraints imposed by school principals, to obtain permission to have additional time for each subject. Finally, it was difficult to measure an individual child's efforts. Some children concentrated more intently on the test than others. Children who completed the questionnaire rapidly were not always the fastest readers in the class, according to teachers' reports. Some children asked the examiner to pronounce difficult words while others did not ask for any assistance. Especially with the youngest children, variability in test concentration may have contributed to the low reliability.

Special Response Scales. In addition to the total number of correct responses the child obtained on the questionnaire, the type of wrong answers the child selected were also of interest. Patterns of incorrect responding sometimes expressed coherent ideologies. For example, eight items offered a "medical" response, an answer reflecting a confusion or overidentification of mental health concepts with physical health concepts. The response "A person is sick in bed and has a bandage on his head, usually from a bad shock." to the question "What does mental illness mean?" is classified as a medical response.
### TABLE 1

<table>
<thead>
<tr>
<th></th>
<th>Grade</th>
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<tbody>
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<td>4</td>
<td>6</td>
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<td>.50</td>
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<td>&quot;Family&quot; Scale</td>
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<td>.56</td>
<td>.77</td>
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<td>&quot;Retardation&quot; Scale</td>
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<td>.63</td>
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<tr>
<td>&quot;No Change&quot; Scale</td>
<td>.70</td>
<td>.61</td>
<td>.71</td>
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<tr>
<td>Favorability Measure</td>
<td>.76^a</td>
<td>.74^b</td>
<td>.79^c</td>
</tr>
</tbody>
</table>

^a This is based upon ratings of Chris.
^b This is based upon ratings of Les.
^c This is based upon ratings of Sandy.
Similarly, to suggest "getting medicine from a doctor" as a way to help a person who is "very very nervous all the time" implies the respondent believed medicine is the best of the ways offered to deal with anxiety. While the "medical" responses on a few of the items in this M scale might be considered plausible answers, in each case a better answer is also provided. For example, a better treatment for the very very nervous person than the one given above would be to "talk to a certain kind of doctor about her feelings". With each of the special response scales in the questionnaire, the rightness or wrongness of the answers is less important than the general patterns of attitudes that they reveal.

The "attention" or A scale includes four items; in each item, one response suggests that the behaviour in question simply reflects the individual's attempt to get attention. The explanation that the girl who feels everybody hates her and wants to hurt her is "just feeling sorry for herself and wants to get attention from the teacher" exemplifies this kind of response.

The "effort" or T scale is composed of four items, each offering one answer which suggests that simply by trying harder, an individual could overcome a problem. The very very nervous person, for example, would be "fine if she just tries very very hard not to be nervous".

Each of the five items comprising the "family" or F scale offered the choice of a "family" response. For each item, the family response attributed the behaviour described in the question to parental or familial influences. A law-breaker didn't have a good family life, or the parents of a compulsive litter-saver made him be very clean when he was young.

The "retarded" or R scale includes four items. Each provided an answer which allowed children to relate the concepts of "mental hospital" or "mental illness" to the concept of "retardation". For example, the beliefs that only
mentally retarded individuals go to mental hospitals, or that most mentally ill people are retarded reflect this conceptualization of terms which include the word mental.

Finally, the "no change" or N scale includes four items, each of which states that a mentally retarded or mentally ill person cannot be helped or will never change.

The alpha reliabilities for each of the six special response scales are given in Table 1.

**Character Cartoon Strips**

Four classes of physical or behavioural handicaps to which children might have been exposed were selected. Four characters, each of whom depicted a different kind of handicap, were created, each appearing in a classroom scene and in a schoolyard scene. The characters included (1) an anxious, self-deprecating child; (2) an autistic, withdrawn child; (3) a mildly mentally retarded child; and (4) a physically handicapped child. (See Appendix E for copies of the cartoon strips)

Characters were drawn asexually to avoid biases which might influence children's reactions. To select asexual names for the characters, seven university students rated eleven names as "female", "male" or "either". The four names receiving the greatest number of "either" ratings were randomly assigned to the characters. These names were Les, Sandy, Chris and Corry.

To assess the content validity of the strips, eight clinical psychology graduate students and six psychology undergraduate students were asked to read the strips and briefly describe the characters. The students responses agreed 100% on the nature of each character's problem.

Eight grade 2 children from the pilot group read the strips to ensure
that the vocabulary was within their range and that the general behavioural patterns of the characters were comprehensible to children at that age level. Although a few children had difficulty reading the strips themselves, none had any difficulty explaining the characters' general problems to the experimenter if she read the strip aloud to the child.

Adjective Sheets

Six adjectives were selected to be presented on a four point scale as a rough "favorability" measure. The adjectives were clean/dirty, strong/weak, rich/poor, honest/not honest, good/bad, brave/cowardly. No adjective whose rating would be affected directly by the cartoon drawing was chosen and only adjectives which could be used for all four characters were included. Adjective pairs such as healthy/sick, smart/stupid, friendly/unfriendly or polite/rude were not selected because in each case, the adjective pair was inappropriate for one of the characters.

Adjectives were arranged randomly on the adjective sheet, and positioning of the positive and negative forms of the adjectives was systematically varied to prevent children from selecting adjectives in the same position and with the same value in each row. All adjective sheets presented to the subjects were identical (Appendix F).

To evaluate the reliability of the favorability measure, the internal consistency of the adjectives was assessed for one character at each grade level. The retarded, autistic and neurotic characters were randomly matched with the three grade levels. Results are presented in Table 1.

Peabody Picture Vocabulary Test (PPVT)

The PPVT Form A was employed in this study. The PPVT IQ score provides a rough estimate of verbal intelligence through receptive knowledge of vocabulary (Dunn, 1965). Because principals at both schools had expressed
considerable concern for the amount of time each child was to be out of her or his classroom, the PPVT was chosen as a brief measure to assure the homogeneity of the sample. In addition, unlike many measures of IQ, it was not offensive to either the parents or the principals.

The assumption that recognition vocabulary and verbal definition vocabulary are measuring verbal intelligence "in the same way" has been questioned (Piers, 1965, p. 822). This distinction often noted by clinicians between "receptive" vocabulary and "expressive" vocabulary, however, appears to be based upon the differences in methods of assessment rather than upon any evidence which suggests that they are, in fact, two distinct abilities. Verbal ability, a trait recognized since Thurstone's pioneering work in the field of mental abilities (Thurstone, 1938), is defined by psychologists studying individual differences as one's understanding of the spoken or written word. The way in which that understanding is demonstrated, whether by verbalizing or by pointing, is not important for the trait being measured. According to Hakstian and Cattell (1974), verbal ability, which focuses upon comprehension of words, is distinct from word fluency or the production of words and "may be the best single contributor to traditionally defined general intelligence (Hakstian and Cattell, 1974, p. 146)". The PPVT, which measures what psychologists of individual differences term "verbal ability", is considered therefore an appropriate tool to provide an assessment of children's verbal intelligence.

Procedure

Each child in the test group was individually interviewed for approximately 25-30 minutes. An introductory chat about the child's family or school put the child at ease; no child seemed too uncomfortable to answer the questions as well as he or she could.
In the pretest run of the cartoon strips, it became apparent that although most grade 2 children were capable of reading the strips, the considerable effort required of many of them would have reduced their comprehension.

The following instructions were given to the grade 2 children:

I'm going to show you some cartoon strips or little stories about children in school. I'll read them to you while you look at the pictures, and then I'll ask you some questions about the person in the story. The questions are just to find out what you think about the person. OK? Here is the first story. It is about a person named ____________

Instructions for children in grades 4 and 6 were as follows:

I'm going to show you some cartoon strips or little stories about children in school. There are four stories in all and each story has two parts. Read both parts, and then I'll ask you some questions about the main person in the story. These questions don't really have right or wrong answers, so just think about the questions and give me the best answer you can think of. OK? Here is the first story.

After the child had read the two cartoon strips for one character, the E_ asked her or him the interview questions in the order presented in the interview schedule (Appendix G). When the interview questions were completed, the adjective sheet was presented, accompanied by the following instructions:

Now I'd like you to describe ______ for me in a different way. On this page are words we use to describe people. I want you to pick the word in each row which you think is the best word in that row to describe ____. Then circle it. For example, let's look at the first row here. (Pointing at each word) Do you think ____ is a clean person, a dirty person, a very clean person, or a very dirty person? (Pause while the child selects.) Remember, there are no right or wrong answers. You pick the one in each row which you think describes______ the best.

The adjectives in each row were read aloud for grade 2 children. Grades 4 and 6 children completed the sheets independently.

This procedure was repeated for each of the four cartoon characters. Order of presentation of the characters was counterbalanced across subjects while order of presentation of the two strips concerning any one of the characters was
kept constant. All interviews were tape recorded.

The second experimenter administered the PPVT to the child when she or he had completed the interview.

Approximately three to four weeks after the interviews, each of the interviewed children completed the final version of the questionnaire. Children in grades 4 and 6 did the questionnaire in their classrooms with assistance from E only in the pronunciation of words. Children required 20 to 30 minutes to complete the questionnaire. Grade 2 children were tested individually, and the entire questionnaire was read aloud. Each of the two experimenters read the questionnaire to half of the children, and both experimenters tried to judge the endurance of the individual child. If the child's attention seemed to be waning, the child and the experimenter took a brief break. The majority of grade 2 children did not want to stop during the testing and appeared to be attending throughout the task.

Scoring and Analyses

Questionnaire

Each child obtained a total score and six special scale scores from his or her questionnaire. The total questionnaire scores, PPVT scores and the total and individual comprehension scores from the interviews were correlated in a Pearson product-moment correlation matrix. Comprehension scores were derived as described below.

The total questionnaire scores and the PPVT scores were each compared across grades (2, 4 and 6) by a three-level one-way analysis of variance (ANOVA). Pairwise grade differences were assessed by the Tukey multiple comparison procedure.

The "medical" (M), "attention" (A), "effort" (T), "family" (F), "retarda-
tion" (R) and "no change" (N) scores reflected the number of times within each subscale that the child selected the M, A, T, F, R, or N response respectively. These scores were compared across grades by three-level, one-way ANOVAs. The Tukey multiple comparison procedure was used to assess pairwise grade differences.

Interview

The interview data provided the basis for three types of information: the comprehension scores which yielded a quantitative assessment of the children's responses, the categorized answers which gave a qualitative assessment of the responses, and the favorability ratings.

Comprehension Scores. A scoring schedule was devised in consultation with two other clinical psychology graduate students to award points for responses indicating greater awareness or understanding of the handicap in question (Appendix H). Two coders, both blind to the grade level of the children, scored each of the interviews. These scores are referred to as comprehension scores; each child received an individual comprehension score for her or his responses to each character and a total comprehension score which was the sum of the four individual comprehension scores.

The assignment of a "comprehension" score to a child's responses assumes that the child has been able to verbalize his or her understanding of a situation. In any evaluation of knowledge based upon verbal communication, it is possible that the subject knows more than he or she is able to express. However the possibility of a discrepancy between the child's actual understanding and her or his expressed understanding cannot be assessed in this research. Children did not appear to be struggling to express themselves and, in situations when a child's reasoning seemed unclear, the experimenter probed for clarification. It was therefore assumed that the children's verbalizations
relatively accurately reflected their understanding.

The percentage of intercoder agreement for each character was as follows: 95.5% for Les, 91.2% for Sandy, 93.2% for Chris and 90.0% for Corry. No two scores of the raters differed more than two points. In cases of disagreement, an average of the two scores was taken.

The individual comprehension scores were analysed by a one-way repeated measures ANOVA for each grade. Pairwise differences between characters' scores were assessed by the Tukey multiple comparison procedure. The individual comprehension scores for each character were analysed by a three-level one-way ANOVA and pairwise differences between grades were assessed by the Tukey multiple comparison procedure.

**Interview Response Categories.** Response categories for interview data were designed based upon the findings of a previous study (Maas, 1973) and upon an examination of a random selection of interviews. (See Appendix I for response categories.) Each interview, transcribed from tape, was coded independently by two coders. Both coders were blind to the grade level of the subject. The percentage of responses which were coded identically were as follows: 97.4% for Les, 97.6% for Sandy, 98.6% for Chris, and 99.4% for Corry.

These data, which were the proportions of subjects providing answers in a particular category, were then compared across grades by analyses of variance of independent proportions. (See Marascuilo, 1966.) All children's responses for each character were included in these analyses with the exception of six grade 2 children's responses to Corry and one grade 2 child's response to Les. In each case, the child was unable to identify the character's problem even in a very gross manner. The content of the response was therefore meaningless for these analyses. The six children whose responses to Corry were excluded could not identify the crutches. The child whose response to Les was excluded
could not articulate Les' behaviour beyond saying that she was "a nice person", even after the child had been probed several times. Because these responses did reflect young children's understanding of the behaviours, the children's comprehension scores were included in the other analyses.

**Favorability Ratings.** A value from one to four was assigned to each adjective the child selected; a value of one represented the most negative form of the adjective and four the most positive. The values for each of the six adjectives for a given character were summed. Each subject therefore had four favorability ratings, one for each character.

These scores were analyzed by a three-way ANOVA with two between-subject factors, grade and sex, and one within-subject factor, character. This is a Winer (1971) "Case II" repeated measures design.
RESULTS

The results are presented as follows: (1) the Pearson product-moment correlations among the PPVT scores, the total questionnaire scores and the interview comprehension scores, (2) the analysis of the PPVT scores, (3) the analyses of the questionnaire, including the special response scales and (4) the analyses of the interview data.

Pearson Product-Moment Correlations

In Table 2, the correlation matrix of seven variables for each grade is presented. The results are most clearly considered as the correlations among the three sets of scores: the PPVT scores, the total questionnaire scores and the individual and total character comprehension scores.

Questionnaire Scores and PPVT Scores

For all grades, the PPVT correlated with the total questionnaire scores at the .01 level of significance.

Comprehension Scores and PPVT Scores

The PPVT correlated significantly with the total comprehension scores for grades 4 and 6 at the .01 and .05 levels respectively. For grade 4, the PPVT scores correlated with comprehension scores for two characters, Les and Corry; the PPVT scores correlated with the comprehension scores for Les in grade 2 and with comprehension scores for Sandy in grade 6.

Questionnaire Scores and Comprehension Scores

The total questionnaire scores correlated significantly with the total comprehension scores at the .01, .05 and .01 levels respectively for grades 2, 4 and 6. The questionnaire scores correlated with three character comprehension scores for grade 2 (Les, Corry and Sandy) and for grade 6 (Les, Corry and Chris). For grade 4, the questionnaire scores correlated with one character
<table>
<thead>
<tr>
<th></th>
<th>QT</th>
<th>LES</th>
<th>CHRIS</th>
<th>CORRY</th>
<th>SANDY</th>
<th>TCS</th>
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<td></td>
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<td>.262</td>
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<td>.330</td>
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<td>.427*</td>
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<td>.484**</td>
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<td>.468**</td>
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<td>.285</td>
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<td>.445*</td>
<td>.373*</td>
<td>.520**</td>
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<td>.302</td>
<td>.159</td>
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<td></td>
<td></td>
<td>.796a</td>
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</table>

** p<.01  
*  p<.05

a These are part-total correlations. Each individual comprehension score contributes to the total comprehension score; this accounts for the high correlations.
comprehension score (Les).

Analysis of the PPVT Scores

The ANOVA by grade of the PPVT scores indicated no significant differences among the grades, suggesting that the sample of children was homogeneous with respect to verbal intelligence. The results appear in Table 3.

Analyses of the Questionnaire Scores

Results of the ANOVAs and the Tukey contrasts run on the total questionnaire score and on each of the special response scales are given in Table 3. All three grades differed significantly from one another in the total questionnaire scores; mean scores increased with grade level.

Grades 4 and 6 differed significantly from grade 2 on the M and T scales. In both cases, grade 2 had a significantly higher mean score than the other grades. On three scales, the A scale, the F scale and the R scale, grades 2 and 6 differed significantly. Grade 2 had a higher mean score on the A scale while grade 6 had higher means on the F and R scales. In each case, the mean score for grade 4 was intermediate between those of the other grades. Finally, grade 4 differed significantly from grades 2 and 6 on the N scale; grade 4 had a higher mean than either of the other grades.

Analyses of the Interview Data

The analyses of the interview data are presented in two sections: (1) analyses comparing grades and (2) analyses comparing characters.

Analyses Comparing Grades

This section includes the comparisons of the comprehension scores and of the interview responses.

Comprehension Scores. For each character, the comprehension scores of the three grades were contrasted by a three-group one-way ANOVA. The results of these analyses, presented in Table 3, reveal that for each character, grade
### TABLE 3

Analyses of Variance by Grade of PPVT Scores, Questionnaire Total Scores, Questionnaire Subscale Scores and Individual Character Comprehension Scores

<table>
<thead>
<tr>
<th>Dependent Variable</th>
<th>Means by Grade</th>
<th>MS&lt;sub&gt;W&lt;/sub&gt; (df=87)</th>
<th>F&lt;sup&gt;a&lt;/sup&gt;</th>
<th>p</th>
<th>Significant Pairwise Differences&lt;sup&gt;b&lt;/sup&gt;</th>
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</thead>
<tbody>
<tr>
<td>PPVT</td>
<td>114.27 116.77 114.57</td>
<td>163.09</td>
<td>.34</td>
<td>&gt;.50</td>
<td>None</td>
</tr>
<tr>
<td>Questionnaire Total</td>
<td>10.93 17.37 21.20</td>
<td>11.56</td>
<td>69.85</td>
<td>&lt;.001</td>
<td>2 vs. 4, 2 vs. 6, 4 vs. 6</td>
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<tr>
<td>&quot;Medical&quot; Response</td>
<td>2.87 1.33 .77</td>
<td>1.66</td>
<td>22.76</td>
<td>&lt;.001</td>
<td>2 vs. 4, 2 vs. 6</td>
</tr>
<tr>
<td>&quot;Effort&quot; Response</td>
<td>1.40 .50 .50</td>
<td>.55</td>
<td>14.62</td>
<td>&lt;.001</td>
<td>2 vs. 4, 2 vs. 6</td>
</tr>
<tr>
<td>&quot;Attention&quot; Response</td>
<td>.87 .53 .23</td>
<td>.46</td>
<td>6.5</td>
<td>&lt;.005</td>
<td>2 vs. 6</td>
</tr>
<tr>
<td>&quot;Family&quot; Response</td>
<td>1.30 2.20 2.43</td>
<td>2.37</td>
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<td>2 vs. 6</td>
</tr>
<tr>
<td>&quot;Retardation&quot; Response</td>
<td>2.13 2.90 3.03</td>
<td>1.57</td>
<td>4.49</td>
<td>&lt;.025</td>
<td>2 vs. 6</td>
</tr>
<tr>
<td>&quot;No Change&quot; Response</td>
<td>.76 1.47 .70</td>
<td>.96</td>
<td>5.66</td>
<td>&lt;.005</td>
<td>2 vs. 4, 4 vs. 6</td>
</tr>
<tr>
<td>Les</td>
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<td>13.46</td>
<td>&lt;.001</td>
<td>2 vs. 4, 2 vs. 6</td>
</tr>
<tr>
<td>Sandy</td>
<td>4.37 5.90 6.07</td>
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<td>8.90</td>
<td>&lt;.001</td>
<td>2 vs. 4, 2 vs. 6</td>
</tr>
<tr>
<td>Chris</td>
<td>3.40 4.77 5.23</td>
<td>4.23</td>
<td>6.44</td>
<td>&lt;.005</td>
<td>2 vs. 4, 2 vs. 6</td>
</tr>
<tr>
<td>Corry</td>
<td>3.81 5.82 6.21</td>
<td>2.57</td>
<td>19.40</td>
<td>&lt;.001</td>
<td>2 vs. 4, 2 vs. 6</td>
</tr>
</tbody>
</table>

<sup>a</sup> MSs for effects reproducible by F (for effect) x MS<sub>W</sub>.

<sup>b</sup> Tukey's method of multiple comparisons was employed.
2 children were significantly less likely to obtain as high comprehension scores as grades 4 and 6 children. The two higher grades did not differ significantly in the comprehension of any of the characters.

**Interview Responses.** The coded interview data were analysed by tests of independent proportions, a K-sample analog for proportions of the analysis of variance. The multiple comparisons procedure is a chi square analog of Scheffe's multiple comparison procedure (Marascuilo, 1966). These analyses provide a method for making multiple contrasts to determine the sources of significant differences in a significant overall $\chi^2$. In Table 4, the results of the analysis on each of the coding categories for each character are presented. No analyses were performed on data which indicated similar or equal proportions of each grade in the response categories for a given question; these proportions which did not differ significantly are given in Appendix J.

Responses to each question were analysed according to the categories presented in the coding appendix (Appendix I). Results are presented in the order that the questions were discussed in the interview. (See Appendix G for the specific questions asked in the interview.) The four topics are etiology, fault, control and change.

**Etiology**

**Question:** Was X "born that way" or is the behaviour a result of an experience?

**Categories:** (1) Born that way; (2) Experience

**Results:** None of the grades differed in its choice between "born that way" or "experience" for any of the characters except Les. The overall $\chi^2$ was significant for Les, and grade 2 children tended to perceive her as "born that way" more frequently than did the other two grades; however, multiple comparisons revealed no significant differences among the grades.
<table>
<thead>
<tr>
<th>Dependent Variable</th>
<th>Proportion by Grade</th>
<th>$X^2$</th>
<th>p</th>
<th>Significant Pairwise Differences</th>
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<td>2 vs. 6</td>
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<td>Control: Wants to</td>
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<td>act that way^b</td>
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</tr>
<tr>
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<td>(Can't help it)</td>
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<tr>
<td>Chris</td>
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<tr>
<td>Change^c</td>
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</tr>
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<td>Les</td>
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<td></td>
</tr>
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<td>.17 .03 .03</td>
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</tr>
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</tr>
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<tr>
<td>5</td>
<td>.07 .33 .20</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Corry</td>
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<td></td>
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<td></td>
</tr>
<tr>
<td>1</td>
<td>.29 .33 .20</td>
<td></td>
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</tr>
<tr>
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<td>.46 .13 .53</td>
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<td>.21 .17 .03</td>
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<td>.00 .03 .17</td>
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<td>.04 .33 .07</td>
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<td>Dependent Variable</td>
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<td>( p )</td>
<td>Significant Pairwise Differences</td>
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<td><strong>Difficulty of Change</strong>&lt;sup&gt;b&lt;/sup&gt;</td>
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<td>(Hard)</td>
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<tr>
<td>Les</td>
<td>.46</td>
<td>.79</td>
<td>.76</td>
<td>6.89</td>
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<td>Sandy</td>
<td>.52</td>
<td>.82</td>
<td>.78</td>
<td>6.78</td>
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<tr>
<td>Corry</td>
<td>.35</td>
<td>.85</td>
<td>.88</td>
<td>16.30</td>
</tr>
</tbody>
</table>

a These tests are based upon an analysis described in Marascuilo (1966). Only those analyses with a significant overall \( X^2 \) are reported. Proportions among which non-significant differences existed are given in Appendix J.

b These questions had only two possible answers or categories so only one proportion is reported. The numbers presented are the proportions of children who selected the answer in parentheses under the specific question.

c Categories for this question are the following:
1 = Nonsocial; accident/disease
2 = Social-internal; self-induced
3 = Social-external; other-induced
d Categories for this question are the following:
1 = Does not want to act that way
2 = Wants to act that way
3 = Not aware of actions
e Categories for this question are the following:
1 = Can not change or will not change
2 = Change by trying hard
3 = Change by growing out of it
4 = Change through self-initiated efforts and with others as reinforcers
5 = Change through other-initiated help
Question: If the behaviour is a function of an experience, what kind of experience?

Categories: (1) Nonsocial or accident/disease; (2) Social-internal or self-induced; (3) Social-external or other-induced.

Results: Grades differed significantly in their descriptions of etiological experiences for three of the characters.

Les: Multiple comparisons revealed several differences among the grades. Grade 4 children, significantly more than grades 2 or 6 children, described self-induced etiological experiences. Grade 6 children were significantly more likely than grade 4 children to suggest an etiology which involved others.

Sandy: Grade 6 children, significantly less than grades 2 and 4 children, perceived Sandy's behaviour as a product of self-induced factors. Rather, the oldest group was significantly more likely than the other two groups to describe an etiology involving other persons.

Corry: Grade 6 children contrasted with those in the other two grades in the multiple comparisons. The two lower grades were more likely than grade 6 to explain Corry's behaviour purely as a result of the character's organic problem. Grade 6 children noted the role of both self-induced and other-induced factors in contributing to Corry's behaviour significantly more than grade 2 children.

Fault

Question: Is it X's fault that she or he acts like this?

Categories: (1) Not at fault; (2) At fault

Results: The overall $\chi^2$ was significant for Les and Sandy, but for neither of the other characters. None of the multiple comparisons for either Les or Sandy was significant, although as grade level increased, the proportion of
children ascribing fault to each character also increased.

**Control**

**Question:** Does X want to act this way?

**Categories:** (1) Does not want to act this way; (2) Wants to act this way; (3) Is not aware that he or she is acting any particular way.

**Results:** For two characters, Chris and Sandy, the overall \( \chi^2 \) was significant. Grade 6 children contrasted with grade 2 children for Chris and with grades 2 and 4 children for Sandy; in each case, grade 6 children suggested that the characters were unaware that their behaviour was different.

**Questions:** If X doesn't want to act this way, then why does he or she continue to do it?

**Categories:** (1) Can't help it; (2) Not trying hard enough

**Results:** The only significant difference among the grades concerned Chris. Grade 2 children, significantly more than those in the other grades, perceived Chris's behaviour as a function of lack of effort.

**Question:** If X does want to act this way, why would she or he want to be that kind of person?

**Categories:** (1) To get attention; (2) Enjoys being that way

**Results:** There was a slight but significant tendency for grade 2 children to perceive Les's behaviour as an attempt to get attention. None of the other tests was significant.

**Change**

**Question:** Could X change? If so, how would change come about?

**Categories:** (1) No change possible; (2) Change by trying harder; (3) Change by "growing out of it"; (4) Change through self-initiated actions but involving others; (5) Change through other-initiated help.
Results: Multiple comparisons indicated significant differences among the grades for each of the characters.

Les: Grade 2 children contrasted with grade 4 children in believing Les would "grow out of it". Grade 6 children were more likely than grade 2 children to suggest self-initiated help as a form of change.

Sandy: Grade 4 contrasted with the other two grades in providing responses focused upon other-initiated change. Grade 6 differed from grade 2 in suggesting self-initiated change. Significantly more than grade 4 children, grade 2 children tended to describe "try harder" solutions for Sandy's situations.

Chris: Grade 2 children, more than children in either of the other grades, thought Chris could change simply by trying harder. Grade 4 children differed from grade 2 children in suggesting Chris needed assistance from others.

Corry: Five multiple comparisons were significant. Grade 4 contrasted with the others in emphasizing other-initiated help. Both grades 2 and 6 differed from grade 4 in believing Corry could change by "trying harder". Grade 6 children were more likely than grade 2 children to suggest self-initiated change.

Question: Would it be hard or easy for X to change?

Categories: (1) Change would be hard; (2) Change would be easy.

Results: For three characters, grade 2 children were significantly more likely than the other grades to believe changing would be easy. Grade 2 contrasted with grade 4 for Les and Sandy; grade 2 contrasted with both grades 4 and 6 for Corry.

Analyses Comparing Characters

In two analyses, comparisons were made among the characters: (1) ANOVAs of the comprehension scores and (2) ANOVAs of the adjective favorability scores.
Comprehension Scores. To compare children's comprehension of one character with their comprehension of another character, one way repeated measures ANOVAs were run for each grade level, followed by multiple comparisons using Tukey's method. The results are presented in Table 5.

For grade 2 children, differences in comprehension of the four characters were not significant.

Among grade 4 children, the characters were not understood equally well. Multiple comparisons indicated that the children understood Chris significantly less well than each of the other three characters. There were no significant differences among their comprehension scores for the other three characters.

Grade 6 children were significantly less likely to understand some characters as well as others. There were significant differences in the comprehension scores between Chris and Corry and between Chris and Les. Chris, in both cases, was less well understood.

Adjective Favorability Measure. A three-way analysis of variance with two between-subject factors, grade and sex, and one within-subject factor, character, was used to analyse the adjective favorability data. (As noted earlier, favorability scores were summed over the six adjectives to yield the scores analysed here;) This is a Winer "Case II" (1971) repeated measures design. As the results in Table 6 indicate, of the three main effects, only character was significant; grade was of borderline significance. The character by sex interaction was also significant.

Mean favorability scores for the characters by grade are given in Table 6. For each grade, Sandy received the lowest favorability score, followed by Les, Corry and Chris, in that order.

Results of multiple comparisons using the Tukey method on the mean favorability scores revealed five significant differences. Both Sandy and Les were
Table 5
One-Way Repeated Measures Analyses of Comprehension Scores

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<thead>
<tr>
<th>Grade</th>
<th>Chris</th>
<th>Corry</th>
<th>Les</th>
<th>Sandy</th>
<th>( \text{MS}_{\text{res}} ) (df=87)</th>
<th>F</th>
<th>p</th>
<th>Significant Pairwise Differences&lt;sup&gt;a&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>3.40</td>
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<td>3.93</td>
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<tr>
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<td>4.77</td>
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<td>5.90</td>
<td>5.90</td>
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<td>3.76</td>
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<td>6.21</td>
<td>6.40</td>
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<td>4.61</td>
<td>&lt;.005</td>
<td>Ch vs. Co, Ch vs. L</td>
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<sup>a</sup> Tukey's multiple comparison procedure was employed.
TABLE 6
Analysis of Favorability Scores

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<th>Character</th>
<th>Les</th>
<th>Chris</th>
<th>Corry</th>
<th>Sandy</th>
<th>Grade Means</th>
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<td>15.93</td>
<td>15.77</td>
<td>13.67</td>
<td>15.08</td>
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<th>MS</th>
<th>F</th>
<th>p</th>
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<td></td>
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<td>.47</td>
<td>&gt;.50</td>
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<td>.62</td>
<td>&gt;.50</td>
</tr>
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<td></td>
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<tr>
<td>Within Subjects</td>
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<td>51.25</td>
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</tr>
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<td>1.50</td>
<td>.55</td>
<td>&gt;.50</td>
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<td>Sex x Character</td>
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<td>10.72</td>
<td>3.95</td>
<td>&lt;.01</td>
</tr>
<tr>
<td>Grade x Sex x Character</td>
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<td>.55</td>
<td>.20</td>
<td>&gt;.50</td>
</tr>
<tr>
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<td>2.72</td>
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<td>Sandy</td>
<td>Les</td>
<td>Corry</td>
<td>Chris</td>
<td></td>
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<td>------</td>
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<tr>
<td>13.93</td>
<td>15.56</td>
<td>16.44</td>
<td>16.68</td>
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Critical Difference between Means by Tukey's Method = .64

**Significant Pairwise Differences**

- Sandy vs. Les
- Sandy vs. Corry
- Sandy vs. Chris
- Les vs. Corry
- Les vs. Chris
- Les vs. Chris
perceived significantly less favorably than each of the other two characters. Sandy was also perceived significantly less favorably than Les. Corry and Chris did not differ in favorability.
DISCUSSION

Results of this study indicate that between the ages of seven and twelve, children's beliefs about mental health phenomena are dramatically modified. These developmental changes suggest the possible interaction of two factors: the natural evolution of the child's cognitive processes and the child's growing social experience. The grade 2 child has had less social experience and retains a largely egocentric perspective of others which limit and shape her or his attempts to define concepts or explain behaviours. As the child approaches adolescence, he or she has shifted from an egocentric perspective of the world to a more adult perspective, expressed in sundry aspects of the child's thought.

The two measures specifically devised for this research tapped different but complementary kinds of awareness of mental health phenomena in children. The Mental Health Concepts Questionnaire provided a rough index of how much correct information children possessed. In addition, the questionnaire permitted an examination of some of the children's misconceptions and orientations. The selection of incorrect answers revealed patterns of beliefs, and the changes in these patterns across ages suggested ways in which ideas about mental health concepts develop.

The interview data indicated developmental changes in children's interpretations of handicapped behaviour. These data also provided measures of "comprehension" and "favorability" for each of the behaviours which were compared across grades and across behaviours.

This discussion examines the responses to both instruments and considers the ways in which those responses conform with cognitive and social developmental patterns. First, the questionnaire and its subscales are discussed. The children's interpretations of each of the four handicapped behaviours, the bulk...
of the discussion are then explored. This section provides the basis for presentation of the more general developmental patterns in children's attitudes toward handicapped behaviour. Following the consideration of these general patterns, the limitations and implications of the study are discussed.

Mental Health Concepts Questionnaire

The questionnaire has clear limitations as an instrument on which to base strong statements about children's knowledge of mental health concepts. The alpha reliabilities for the total questionnaire are far lower than desirable, largely due to problems associated with creating an instrument for the chosen age range and in the chosen topic. The investigation of these particular age groups necessitated an undesirably large range in the level of questions, resulting in a test of great difficulty for grade 2 children. Because the project concerned mental health phenomena, it was rejected as "too sensitive" by the Vancouver Public Schools where a larger number of pilot subjects would have been available to respond to a longer pilot questionnaire. As noted earlier, a more reliable measure could have been designed for a more homogeneous sample available for greater periods of time. Throughout the following discussion, therefore, the low reliability of the questionnaire should be kept in mind.

The total questionnaire scores were significantly correlated with both the PPVT scores and with the total comprehension scores, suggesting common bases between the questionnaire and each of the other measures. Because both the PPVT and the questionnaire measured vocabulary, facility with language or general verbal ability was a shared factor in the tests. Similarly, the relationship between the questionnaire scores and the comprehension scores indicated that the two measures tapped overlapping abilities. Some of the questionnaire items requested interpretations of behaviours similar to the behaviours in the cartoon strips. A child who was knowledgeable about mental health terms might also be
expected to be knowledgeable about handicapped behaviour. However, because the correlations between the questionnaire and each of the other measures were low, the instruments cannot be said to tap the same kinds of knowledge. Individually children's responses exemplified this finding. A psychiatrist's child in grade 6 recognized many of the mental health terms on the questionnaire, had a high PPVT score, and was extremely articulate in the interview, but the child's comprehension score was only average. The child's sophistication in mental health vocabulary was not balanced by a sophisticated comprehension of behavioural problems. Conversely, another grade 6 child who has had speech problems for years had below average PPVT and questionnaire scores for her grade and yet had an exceptionally high comprehension score. This child was extraordinarily thoughtful and knowledgeable about the characters' problems. Thus, while the questionnaire tapped a knowledge which was related both to general verbal ability and to basic understanding of handicapped behaviour, the questionnaire also required abilities which were independent of those two areas.

Significant differences among all grade levels on the total questionnaire scores indicated that the ability to select correct definitions of mental health concepts increased over this age range. However, the increase in mean score was greater between grades 2 and 4 than between grades 4 and 6. This pattern was manifested throughout the research: grade 4 children more closely resembled grade 6 children than grade 2 children. This finding may reflect the inappropriateness of the task for grade 2 children; they are less accustomed to taking tests and many of the questions were extremely difficult for them.

Alternatively, it may suggest that this is an area in which children become dramatically more informed between the ages of seven and nine. Other authors have also noted significant changes in children's thought during these years (Flapan, 1968; Piaget, 1950; Rothenberg, 1970). The child's shift from
egocentric thought into operational thought has put many behaviours and concepts into new perspective. The operational child's thought about psychological causality can be much more flexible and abstract than that of the egocentric child. Social experiences may have introduced handicapped people into the child's life, and now the reasons why people behave differently are a source of interest.

In this sample, grade 4 appeared to represent an age at which children were beginning to think about and use some physical and mental health terms in the context of "craziness". For example, on the questionnaire, 36%, 70% and 33% of children in grades 2, 4, and 6 respectively defined "spastic" as "crazy in the head"; grade 4 children were significantly more like to select the slang definition than children in either of the other grades. Few grade 2 children had heard of "spastic", and most grade 6 children (63%) defined it correctly. The children in grade 4 also seemed cautiously curious about the topic. After they had responded to the questionnaire, many children were eager to go over the questions with the experimenter. When the discussion focused upon the meaning of the word "mental", the experimenter asked children what they thought the term meant. Each of the seven children who volunteered to define the term believed that it meant "crazy", "weird", "something is wrong in your head" or some notion related to abnormality or deviance. Even after the experimenter had explained the meaning of the word, children who were called upon to repeat the experimenter's definition continued to include the connotation of bizarreness. The grade 4 child's curiosity about mental health concepts and about behaviour suggested an emerging expression of what Olmsted and Durham (1976) have called a cultural belief system about mental illness.
The patterns of answers selected by the children provided a method for examining some of their commonly held misconceptions and interpretations. The kind of responses chosen, if consistent within groups of questions offering a particular type of answer, can adumbrate conceptual beliefs of children at the various ages. Although each of the six subscales has few items, the scales have fairly high reliabilities, suggesting stable and consistent patterns. The numbers provided parenthetically after each response indicate the item on the final questionnaire from which the response comes.

Two scales distinguished interpretations at the grade 2 level from those at grades 4 and 6: the "medical" or M scale and the "effort" or T scale. On both scales, grade 2 had a significantly higher mean score than did the other grades.

The "Medical" or M Scale. The M scale is composed of eight items, each supporting an association of physical sickness with mental health phenomena.

The following responses are included:

(a) Mentally ill means a person is sick in bed and has a bandage on his head usually from a bad shock. (7)

(b) A person who is very very nervous all the time should get some medicine. (11)

(c) Mental hospitals are places for people who have sicknesses other people can catch or for people who need operations on their brains. (12)

(d) People become mentally ill by catching it from someone else who is mentally ill.

(e) A mentally retarded person can be helped by a doctor who gives him medicine to make him well or who does an operation on his brain to make him well. (15)

(f) People in mental hospitals feel sick in the head and lie in their beds. (19)

(g) Someone who is mentally ill can be helped by a doctor who does an X-ray of his brain or he can be helped by going to the drugstore and getting some medicine. (22)
If someone really thinks the walls are moving back and forth, even though of course the walls are still, that person needs glasses.

These responses expressed an association of mental disorders with medical treatment or medical images. The significantly higher mean score for grade 2 may be a function of two kinds of responses. It might be assumed that many grade 2 children did not know the term "mental" and were therefore simply associating the terms "illness" and "hospital" with medical concepts. Although most grade 2 children did recognize the term "mental retardation", the word "retardation" probably enabled them to identify the concept. A few of the grade 2 children, however, told the examiner that "mental" meant "crazy" and expressed an image of mental problems as "brain sickness", the definition of mental illness given to the examiner by one child. Like any other sickness, brain sickness might be contagious, might require a bandage, an operation, an X-ray or medicine. One child, as she answered the questions about the mental hospital, said she had had her tonsils taken out in a mental hospital. When asked why she thought she had been in a mental hospital, she explained that tonsils are in the throat, just near the brain, and they fix brains in mental hospitals.

Several grade 2 children revealed this "medical" orientation during the interview, suggesting medical cures for characters whose problems they had clearly defined as emotional. However, although grade 2 children were significantly more likely to demonstrate this confusion of mental and physical problems than older children, this kind of belief was also occasionally present in older children. A grade 4 child, for example, described a field trip his class had taken to "a real mental hospital" where everyone used crutches.

The "Effort" or T Scale. The T scale includes the following responses:

(a) Mentally retarded people are not smart because they don't try hard enough. (5)
(b) A very very nervous person could stop being nervous if she just tried very very hard to be calm. (11)

(c) A person who is mentally ill should try hard not to be that way. (26)

(d) A mentally retarded person who tried very hard could become very smart. (35)

In contrast with the older children, grade 2 children strongly believed behaviours or problems could and should be changed with effort. The philosophy that everything can be changed by "trying hard" expressed an egocentric reasoning frequently emerging in the grade 2 children's interviews. The seven year old generally has not been faced with insurmountable tasks or chronic conditions; that an individual cannot control her or his own behaviour is not logical to the egocentric child. The child's own efforts or internal forces appear, to the child, to be the basis for her or his own behaviour, and the child uses this philosophy of causality to explain the behaviour or conditions of other persons. This emphasis of the grade 2 child upon effort as a means to change is supported by the findings of the preliminary investigation presented in the introduction section.

All grade 1 and grade 2 children in the pre-pilot group had defined and identified the cause of mental retardation correctly on the first pilot questionnaire. However, the results of this scale indicated that the children were not aware of the permanence and limitations of retardation.

Responses to three scales indicated a significant difference between grades 2 and 6; there was no significant difference between grades 2 and 4, nor between grades 4 and 6. These responses suggested a kind of developmental trend, although not in the strict statistical sense of the word. In this discussion, the term "trend" signifies that, as children get older, they were increasingly or decreasingly likely to interpret behaviour or terms in a particular way. The three scales which revealed this pattern are: the "Attention" or A scale,
the "Family" or $F$ scale, and the "Retardation" or $R$ scale.

The "Attention" or $A$ Scale. The $A$ scale includes four examples of neurotic or psychotic behaviour which are interpreted simply as attention seeking.

(a) A girl feels everybody hates her and wants to hurt her because she feels sorry for herself and wants attention. (6)

(b) A man obsessively collects litter and becomes upset if his wife attempts to throw it out; he does this to be stupid and get attention. (17)

(c) A woman talks quietly out loud to herself on a bus, as though someone were sitting beside her; she is being silly and trying to attract attention. (21)

(d) A lady washes her hands four times every hour, believing something bad will happen to her if she doesn't; she is being silly and trying to get attention. (37)

The interpretation of behaviours as attention-seeking is by no means foreign to psychologists today and, as noted earlier, these responses are not necessarily wrong. For each of the questions, however, a more sophisticated explanation of the behaviour was offered.

The grade 2 child who consistently selected an "attention" interpretation of behaviours espoused a philosophy which older children increasingly rejected. The intuitive interpretation of "silly" behaviour is that its purpose is to attract attention, perhaps stemming from parents and teachers who point out the attention-getting aspects of other children's behaviour. As the child grows older, she or he is less likely to view strange behaviour as "silly" and is more likely to be aware of other possible reasons for peculiar behaviour. Socially, children become increasingly wary of someone who is "different"; strange behaviour becomes alienating rather than amusing.

Additionally, as children become less egocentric, they are less likely to consider only the overt behaviour in a situation and more likely to hypothesize about the more covert factors contributing to the behaviour (Flapan, 1968).
Similarly, in the child's moral development, Piaget (1932) notes that young children judge acts by their physical consequences whereas older children base evaluations more upon the intention of the actor. Although this scale has only four items, the finding that children increasingly interpreted a person's behaviour based simply upon the behaviour itself seems to fit within the general framework of cognitive and social developmental theory.

The "Family" or F Scale. The results of the F scale complimented those of the A scale. As the interpretation of behaviours as "attention-seeking" decreased with age, the interpretation of behaviour as a reflection of familial conditions increased. These five responses stress the role of the family in creating a behavioural pattern.

(a) A girl feels people hate her and want to hurt her because her parents didn't show her they loved her. (6)

(b) A person breaks laws because he didn't have a good family life. (9)

(c) A man obsessively saves litter and becomes upset when his wife attempts to throw it out because his parents made him keep very clean when he was a child. (17)

(d) A kid hits little kids and scares them because his parents are very mean to each other and that upsets him. (27)

(e) A lady washes her hands four times every hour because her parents used to get mad if she was dirty. (35)

Increasingly with age, children seemed to become aware of the role that a family plays in contributing to a person's behaviour. Young children generally did not conceive of parents as playing a role in the causality of children's problems. This finding may be interpreted in two ways. Many children, with unconditional respect for parents, may not believe parents are capable of such wrong-doings. Just as many grade 2 children believed characters would outgrow their behaviours (because adults are never maladjusted), so they felt that behavioural problems in children were unlikely to be caused by adults.
Alternatively, young children simply may not think in causal terms involving others. Many grade 2 children perceived behaviour as largely self-induced and as internally controlled, indicated by the T scale and in the interviews. The egocentric child's interpretation of behaviour is based more upon the immediate consequences or function of the behaviour than upon its less apparent causes. The hypothesizing of non-proximate causes for a behaviour, such as familial influences, is more abstract conceptually. The reasoning is further removed from the actual behaviour and therefore requires greater flexibility in thinking. For example, the grade 2 child is likely to believe that a lady who washes her hands four times each hour is being silly. This is an intuitively reasonable interpretation. The older child, however, is able to role-play and to realize that the motivating forces for the behaviour are probably more complex than silliness.

The increasing emphasis on the family as a cause of behaviour also reflects the child's growing awareness of behaviour as a part of a personality. In the interviews, when a grade 2 child mentioned the past, he or she usually cited an incident. A person's behaviour arose from one experience. As children grow older, they become more likely to recognize behaviours as part of a total person and as created by repeated exposure to situations eliciting the behaviour, such as a family. The development of this perspective, which was repeatedly illustrated in the interview data, is supported by the results of this scale.

The "Retardation" or R Scale. Four responses which associate the concepts of mental hospital and mental illness exclusively with mental retardation.

(a) Mental illness means a person was born retarded. (7)

(b) A mental hospital is only for people who are brain damaged or mentally retarded. (12)

(c) Most mentally ill people are retarded. (16)
(d) In mental hospitals, most of the people act just like us, except they are all retarded. (19)

The mean R score increased with grade level. Children learn the term "retarded" early in their school years, and the concept of retardation evidently becomes associated with other terms involving the word "mental". "Mental hospital" and "mental illness", as grade level increased, were increasingly assumed to concern retardation and brain damage by children in this sample. Unfortunately, none of these questions isolates the way children differentiate the terms mental illness and mental retardation. Casual talks with children revealed that while a few children distinguish the two, most equate them. One exceptionally articulate child in grade 4 explained that mental illness was worse than mental retardation because the brain of a mentally ill person will never work properly whereas a mentally retarded person will always have to work harder than other people but "his brain works a teensy bit right". Another grade 4 child believed that retardation was the childhood condition of mental illness.

The results of this scale may be interpreted in the following way. The term "mental" alone was not generally recognized by most grade 2 children, as noted in the discussion of the M scale. Most grade 4 children thought of "mental" as "crazy" and several referred to a character in the interview as "mental". This suggests the development of a concept of "mental" at age eight or nine which soon thereafter becomes associated with the concepts of mental hospital and mental illness. While grade 4 children did not differ significantly from either grade 2 or grade 6 children on this scale, their mean was much closer to that of the grade 6 children. Some grade 6 children apparently lumped together all terms which include the word "mental" and assumed they shared the connotation of retardation. Because it is unlikely that a child in grade 6 would have
been exposed to labeled psychotic or neurotic behaviour, mental retardation is probably the child's only concept of "mental" disorder.

The "No Change" or N Scale. On one scale, the N scale, grade 4 children differed from those in both of the other grades. This scale includes four responses suggesting that mental illness and mental retardation cannot be treated.

(a) Someone who is mentally retarded cannot be helped. (15)
(b) Someone who is mentally ill cannot be helped. (23)
(c) Someone who is mentally ill will always be that way. (26)
(d) Someone who is mentally retarded will always be that way. (35)

The selection of these answers suggests a developmental shift from the grade 2 M response, which was offered in questions 15 and 22, or the T response, offered in questions 26 and 35, to an awareness of the seriousness of retardation and mental illness. The profoundness of the conditions, which a child might be likely to encounter during the elementary school years, undoubtedly inspires awe and curiosity.

During the interviews, six of the thirty children in grade 4 mentioned having siblings or cousins who were brain damaged or mentally retarded. In two cases, the grade 4 children had grade 2 siblings who were interviewed; in neither case did the grade 2 child mention the retarded relative. The permanence of the condition was the factor most often stressed by the grade 4 child with a retarded relative; the children had extended their beliefs about mental retardation to beliefs about mental illness.

Generally, responses to this scale suggested the following. Grade 2 children, unaware of the actual meaning of the concepts of mental retardation and mental illness, were also unaware of the seriousness of the conditions and therefore did not subscribe to a "no change possible" perspective. According to the grade 2 child, almost any problem can be changed either through medical
help or through effort. Grade 6 children, in contrast, have learned more than grade 4 children about these concepts, although some children, as suggested by the R scale, may equate the terms. Grade 6 children were more likely to recognize that ways of helping both mentally retarded and mentally ill individuals do exist. In grade 4, children's understanding of these terms may be influenced by the novelty of the concept of a permanent condition.

Summary of the Questionnaire Responses

The responses to the questionnaire suggested an overall developmental picture of children's explanations of some mental health concepts. There was a general increase in correct identification of technical terms as children grow older, and the special response scales suggested some of the orientations of children at each age level.

Most children had outgrown the "medicalization" of mental health concepts by grade 4 and had begun to recognize mental health concepts as distinct from physical health concepts. Children decreasingly believed that behaviours or conditions can be changed purely by effort. Young children more often interpreted neurotic behaviour as "silly" or simply as "attention-seeking" than older children; with age, children were less likely to judge a behaviour outside of its context and more likely to consider the behaviour a reflection of familial influences.

Most children in grade 2 did not appear to recognize the word "mental" although they did know that "mental retardation" meant "a person is not smart" and that a retarded person is "born that way". When the term "mental" had come into the child's vocabulary at about grade 4, it meant "crazy" or "brain damaged" and connoted a permanent condition. Some children in grade 4 believed, therefore, that individuals with "mental retardation" or "mental illness" cannot be helped and will never change. By grade 6 however, many children were more likely to express a better understanding of both concepts and to recognize
that a mentally retarded or mentally ill individual can be helped.

As they grow older, children were increasingly likely to associate the term "mental" with the concept of retardation and therefore to believe terms which included the word "mental" were referring to concepts concerning retardation. These other concepts, such as "mental hospital" and "mental illness" were increasingly likely to be defined in terms of retardation.

**Interviews**

The interview data provided several different kinds of information about children's perceptions of handicapped behaviour. The comprehension scores or quantitative interview data indicated which characters were most difficult to understand at each of the grade levels and which grades had greater difficulty understanding any of the characters. The qualitative interview data illustrated how children differ in their perceptions of each handicap as they get older. Finally, the favorability measure suggested how, across all grades, the characters compared with one another.

The comprehension scores appeared to measure a knowledge which overlapped with and yet was not entirely dependent upon the verbal ability measured by the PPVT and the knowledge of mental health concepts measured by the questionnaire. The lack of a significant relationship between the comprehension scores and the PPVT scores at the grade 2 level may be attributed partly to the low reliability of the PPVT with younger age groups. Rothenberg (1970) also found that verbal intelligence as measured by the PPVT was more clearly related to social sensitivity among older (grade 5) as opposed to younger (grade 3) children. In general, the comprehension scores appear to rely less upon verbal intelligence than do the questionnaire scores. Other authors have suggested that the relationship between intelligence and social sensitivity or interpersonal awareness is not strong (Hamsher, 1971; Rothenberg, 1970). As noted
earlier, the questionnaire and comprehension scores appear to have tapped overlapping abilities, but clearly they also measured different kinds of awareness.

The comprehension scores supported the distinction noted earlier between grade 2, on the one hand, and grades 4 and 6 on the other. The youngest group received significantly lower scores on all four characters, while the older groups did not differ. As suggested earlier, the differences between grades 2 and 4 appear to be greater than between grades 4 and 6, a finding supported by cognitive developmental theory and research. The shift from pre-operational to operational thinking has freed the child to think in more creative ways; this newly acquired flexibility is evident in the grade 4 child's interpretation of behaviour.

The discussion of the interview data examines the explanations of each of the four characters individually and then focuses upon the more general trends of the children. The concept of "trend", as noted earlier, refers to an increasing or decreasing tendency with age to give a particular kind of response.

Each discussion of a character covers the three major areas explored in the interview: etiology, control (including the concept of fault) and change. The sex of the character used during the discussion is the sex selected by the majority of the children for that particular character.

Chris

Description:

Chris, a mildly retarded child, is depicted as good natured and hard working. In the classroom, he receives extra help from the teacher and is unable to answer a simple question from a peer. He willingly joins a ball game in the school yard, and although he has not understood the rules and plays incorrectly, he enjoys himself. (See Appendix E)
Children of all ages were able to identify Chris's problem, at least in a very general way. Most grade 2 children said simply that Chris did not understand things well; children in grades 4 and 6 elaborated on Chris's obvious inability to understand by relating his behaviour to problems with learning.

Although both the concepts of "understanding" and of "learning" were presented in the cartoon strip, there appears to be a qualitative difference between them. To "understand" connotes a static condition: either one understands or one doesn't understand. To "learn", in contrast, suggests a dynamic process. The younger child was more likely to describe Chris in absolute terms: "He can't understand stuff." The older child, with greater awareness of behaviour as a process, tended to perceive Chris as a person with problems in learning, thereby generalizing the state of understanding to the process of learning.

Chris had the lowest mean comprehension score at all grade levels. For grade 6, Chris was significantly less well understood than two other characters and for grade 4, less well understood than all the other characters. This finding contrasts with the early age at which children become familiar with the general meaning of retardation. To explain these low comprehension scores, two possibilities exist. Either children did not identify Chris as "retarded" but simply as unintelligent, or children did identify Chris as "retarded" but they have misconceptions about retardation. In either case, the children did not appear to understand the behaviours associated with low intelligence and hence received low comprehension scores.

In contrast with the low comprehension scores, Chris received the highest mean favorability score, a score significantly higher than those for Les and Sandy. While the favorability measure of Chris may not have been a measure of attitudes toward a retarded individual, it was nevertheless a measurement of attitudes toward a child recognized as unintelligent. That children rated a
character thought of as "stupid" more favorably than characters perceived as "sad" and/or "lonely" (Sandy) or self-deprecating (Les) indicated these children's priorities; sociability and good-nature were valued more than intelligence.

Concepts of Etiology

Grade 2. Fewer than half of the grade 2 children identified Chris's problem as innate, and most of those who did had difficulty expressing the condition. Some linked Chris's innate condition directly to understanding. The typical explanations was, "When he was born, he could never understand anything." Some struggled more to explain the behaviour. Explained one child,

He's a little mental. (E: What does that mean?) He never listened to anybody ever since he was born so he's not smart. (E: Why didn't he ever listen?) Because his ears weren't good...not like deaf...but he just had the kind of ears that didn't understand stuff right.

Others reasoned that the innate lack of understanding was due to cultural or familial factors. One child suggested Chris was probably Mexican when he was born and "that kind of person can never understand anything". (The child's teacher later informed the experimenter that Mexico and the idea of a foreign language had been introduced to the class the day before the interview).

A majority of the children described experiential etiologies which focused upon self-induced factors such as inattention, not working or listening hard enough, and imitating other children. For some of these children, the idea that an attentive, hard-working child was incapable of understanding was not logical. One child defined Chris's problem in an unusually mature way, saying "She can't learn properly and she just can't catch on fast." But then the child reasoned Chris became that way from not attending school enough, a concrete reason more easy to grasp than the abstract notion of inability to "learn properly".

The few children who described other-induced etiologies all blamed other
people for not explaining things enough times to Chris. The drawings from the cartoon strip which directly contradicted this perspective, even when specifically pointed out, did not seem to them to contradict their formulations. If people explained things carefully, they reasoned, Chris would be as clever as other children. This kind of reasoning was not given in either of the higher grades.

Grade 4. Two thirds of the grade 4 children believed Chris was born with his problem, and they were better able to elaborate upon their ideas than grade 2 children. Many specified some kind of brain damage; Chris was born with a "wrecked brain", "a brain that couldn't listen to directions" or "stupid brains". One child explained,

Something happened when he was in his mom's tummy. She took a lot of pills or drank too much beer. It wrecked his brain so it has one part missing or one part is a little chipped or damaged.

However, the confusion of environmental and organic factors in many responses suggested that the grade 4 child was not completely sure of the implications of an innate condition. A few children said Chris was "born that way" but then described social experiences which influenced Chris' development. One child said, "She was born that way. She had a wrecked brain, I think, but people were teasing her and that wrecked it a little more."

Those who proposed experiential etiologies tended to cite self-induced factors. These included not working hard enough, not listening carefully, and not asking others to explain when he didn't understand. Several children suggested he had done poorly on a test and had lost confidence. Only two children mentioned the role of others as the major factor in the etiology of Chris's behaviour. One, who had the highest PPVT in the sample and the highest questionnaire score in the grade, called Chris a "slow learner" and explained that

At first maybe he had a very bad teacher. She had a bad attitude toward him and he got afraid or bored of her so he didn't concentrate and fell behind.
The other child believed Chris's condition was due to being ignored by other children "because he had trouble learning". His learning problem, according to the child, was "because he was an only child and no one would play with him". This subject, incidentally, is an only child.

Grade 6. About two thirds of the grade 6 children said Chris was born with his problem. Almost all the children phrased Chris's condition in terms of a learning problem: "slow in learning", "can't learn as fast as other kids", "the kind where even when she tries hard, it doesn't help too much". A few children added to their idea of innate factors the belief that Chris wasn't trying as much as he should be. Chris's statement that he is trying his best did not influence these children's reasoning. Even at the grade 6 level, it appears, the concept of innate inabilities is not completely logical.

Of those children who proposed experiential etiologies, half emphasized self-induced behaviours and the others focused upon other-induced behaviours. The self-induced etiologies concerned Chris's lack of attention to school work or loss of self-confidence from poor work. Other-induced etiologies included parents who did not raise Chris correctly and "told her stuff was right even when it was wrong", the inability of his family to give him good food and take proper care of him due to their poverty, people teasing him which resulted in his learning problem, and traumas such as the death of a close friend which "shook him up and kept him from understanding stuff". The notion of parents contributing to Chris's behaviour was expressed only by children in grade 6.

Perception of Control

Most children in each grade believed that Chris's behaviour was not his fault. Those who did ascribe fault to Chris had suggested etiologies in which lack of effort was a major factor. In grade 2, five children who had described self-induced etiologies did not find Chris at fault; in each case, the
fault was God's.

Most children also believed Chris did not want to maintain his present behaviour. Children in grade 2 contrasted with those in the other grades. Almost all children in grades 4 and 6 thought Chris could not help his behaviour. Over half the children in grade 2, however, suggested Chris continued his behaviour, although he did not want to, because he was not trying hard enough to stop. While this reasoning is consistent with a self-induced etiology, it is inconsistent with a "born that way" etiology; grade 2 children when confronted with this inconsistency, did not find it illogical. Their egocentric reasoning was not threatened by inconsistencies. Effort, according to them, enables an individual to overcome any condition.

A significant number of grade 6 children suggested Chris might be unaware of his behaviour. The idea of an individual being unaware of his or her behaviour introduces a new abstract dimension into the child's understanding of psychological causality. The concept of unconsciously motivated behaviour, if expressed by a child, implies he or she is not relying upon the direct connection between conscious motivation and its expression in actions to explain behaviour. The development of this way of thinking will be considered later in the general discussion of grade differences.

**Concepts of Change**

**Grade 2.** Over two thirds of the grade 2 children believed Chris could change by "trying harder", "paying attention more", "listening more" or "studying more". Often this avenue of change was juxtaposed with an organic etiology. When directly presented with this contradiction, no child changed her or his mind. It does not represent illogical reasoning because this innate condition, whatever it is, does not connote a permanent disability.
A few children suggested Chris would grow out of the problem, independent of the kind of etiology suggested. Said one, "In 20 or 30 years, he'll forget he's stupid and he'll start being smart". When asked why Chris would become different as an adult, another child noted simply, "Grown-ups always know more." It would be interesting to know how children with this philosophy explain retardation in an adult.

The few children who suggested others might help Chris stressed the idea that if people were kinder to him, he would like people more and thereby understand more. Probes of such responses only lead to circular reasoning.

All of these perspectives on change reflected the egocentric reasoning of the young child; the source of change was always perceived as within the individual.

**Grade 4.** One third of the grade 4 children emphasized Chris's need to try harder. This emphasis on effort often accompanied the idea that the situation would change with time. As one child explained,

He'll get more brains by thinking a lot and when he gets older, he'll understand more. (E: Why will he understand more when he gets older?) Because he'll be better at thinking.

Another third of the children focused upon the need for other-initiated help, a response which distinguished grade 4 from grade 2 children. Children mentioned special schools or extra help from parents. A few children were still unclear about the relationship between the organic cause and the capacity to change. This exchange exemplified that reasoning:

She needs some people to tell her to listen to directions more. (E: Do you think if she listened to directions more she could become smart?) Yes, everyone gets smarter if they listen more. (E: And you think Chris could become smarter even though you think she was born that way?) Hmm. (Pause) Yeah, I guess so. (E: What was she like when she was born?) She just wasn't used to listening to directions.
Grade 6. The largest number of grade 6 children in any category believed in a "try harder" solution for Chris. These children stressed "paying attention", "practicing", "putting more effort into everything and trying with all his might". Even a child who has a mongoloid sister said Chris could change with effort. For many eleven year olds, as for many seven year olds, it was illogical that an individual who pays attention and tries hard would not be smart, even if the individual was born with the problem. A child with the highest PPVT and comprehension scores in grade 6 said,

"He could change. It's hard to tell since he was born with it, but he might find some subject he's really strong in and become really brilliant. (E: Do you think this could happen even though he was born slow at learning, as you said before?) Yes, but it would take a lot of hard work for him to become very intelligent. It wouldn't come naturally, but it might come."

Across all grades, then, the concept of innately limited intelligence was not clearly understood.

**Difficulty of Change**

Most of the children who believed Chris could change indicated that change would be difficult. Almost half of grade 2 children, compared with one third of grade 4 children and one quarter of grade 6 children, said it would be easy for Chris to change. This difference between grade 2 and the other grades was not significant for Chris, although it was significant for each of the other characters.

**Summary of Children's Interpretations of Chris**

The grade 2 children perceived Chris as a person who was "born that way" or whose lack of understanding was self-induced. His behaviour was not his fault, although many children reasoned that he behaved as he did because he did not try hard enough to cease his present behaviour. He could change by making more effort.
A greater proportion of grade 4 children than grade 2 children perceived Chris's problem as innate, although some suggested the behaviour was self-induced. Grade 4 children did not ascribe fault to Chris for his behaviour and generally believed he "couldn't help it". Channels of change were primarily effort and help from the environment.

Grade 6 children described etiologies similar to those of grade 4 children, although they explained the innate condition more clearly. According to most children, the behaviour was not his fault, and he could not help behaving as he did. Grade 6 children were more likely to believe Chris was unaware of his behaviour than the other children were. Change would come about primarily through effort.

In general, the retarded child was likely to be perceived by children at all grade levels as "born that way". While children might feel relatively favorably toward a retarded child, they nevertheless would expect him or her to work hard to overcome his or her problem. Children at all age levels expressed the belief that with effort, an unintelligent or "slow" person could become smart. Retardation, it appears, is not clearly understood.

**Corry**

**Description**

Corry, a crippled child, makes efforts to do things his classmates do, but has low self-confidence. He attempts a frisbee game with peers, but falls and concludes he should not try to play such games. In the classroom, he is self-conscious about moving slowly, is awkward with his school work, and is apologetic about dropping the glue requested by a classmate. (See Appendix E.)

**General Response**

Children in grades 4 and 6 had significantly higher comprehension scores for Corry than they had for Chris. However, six children in grade 2 could
not identify Corry's problem. Their low comprehension scores contributed substantially to lowering the mean for grade 2 children. Except for the six grade 2 children, all children identified the crutches. At the end of the discussion of Corry with those six children, the interviewer pointed to the crutches and asked each child if he or she knew what they were. All said no. Even when they were labeled as "crutches", none knew what they were.

This finding could be a failure of the measure to clearly depict a crippled child. However, because all the pilot subjects were able to identify the crutches, it was not anticipated that a significant number of children would be unable to recognize them. If the children had not seen or heard of crutches, as they claimed, then their low comprehension scores reflected appropriately the state of some young children's understanding of physical handicaps.

A few older children also expressed some confusion about crutches. Two children, one in each of grades 4 and 6, associated Corry's physical condition with a mental condition as well as an organic condition. Both children assumed crutches signified a leg problem and that people who needed to use crutches were not intelligent.

Like Chris, Corry's relatively low comprehension scores contrasted with a high favorability score. Corry was perceived significantly more favourably than Les or Sandy. This favorability rating may conflict with what adults generally know to be the experience of the physically handicapped child in the schools. She or he is often the victim of ridicule and insensitivity. It is impossible to know whether verbalized attitudes and actual behaviour are related. Would a child who, in an interview with an adult, speaks sensitively about a crippled child actually interact with such a child with the same thoughtfulness?
Concepts of Etiology

All eighty-four children whose responses were included in the analyses of the interview data said Corry's condition was either innate or the result of an accident or disease. Grade 2 children who tended to say Corry had been born with his problem, also believed Corry was born with his sad feelings. With increasing age, the children were more likely to note the contribution of the environment to his feelings, in addition to the organic condition itself. Grade 6 children contrasted with the others in mentioning both self- and other-induced etiologies. Children at this age commented upon Corry's general struggle to adjust, his desire to be like other children, and his self-denigration. They also noted the contribution of other people telling him that he is no good, ugly and clumsy.

These suggestions demonstrate the ability of the older child to abstract from the cartoon strips to other aspects of the character's life. The etiologies mentioned by grade 6 children were, for the most part, not explicitly stated in the strips. The ideas expressed reflected the role-playing ability of the older child, a task of which grade 2 children are incapable. Even when probed, grade 2 children were unable to go beyond the drawings and words of the strip to describe what might contribute to Corry's feelings. The following is a typical discussion:

He's got something wrong with his legs. (E: How do you think he feels?) I think he's sad. (E: What do you think made Corry start having those feelings?) When his legs didn't work. (E: Why did that make him sad?) Because he couldn't play frisbee...and here, he dropped the glue. (E: OK, now pretend you know Corry. Can you tell me about all the things that made him a sad person?) Well, I think he just forgot how to pass the glue when his legs went wrong and he won't remember how to do it again until they get fixed.

This kind of response illustrates Piaget's distinction between pre-operational and operational thought. The young child's thinking was tied directly to the stimulus, allowing no flexibility between his or her visual and concep-
tual pictures. The shift from perceiving Corry's behaviour as solely a function of organic factors to recognizing the role of social factors exemplifies the development of more abstract thinking in children. A physical, organic condition is concrete and tangible; the assumption that ridicule and feelings of insecurity play a part in Corry's behaviour required abstraction from the cartoon strip.

Perception of Control

Most of the children in each grade did not believe Corry's behaviour was his fault. Those who did find Corry at fault emphasized that Corry should build up his self-confidence; he should tell himself he can do things.

Most of the children did not think Corry wanted to act as he did. A few children in grades 2 and 6 had perceived Corry as a person who, though handicapped, tried his best and liked to help people. Those children believed Corry was content with his behaviour. All children who felt Corry was not happy with his behaviour said he could not help his condition or his feelings.

In general, the physically handicapped child, more than any other kind of handicapped child, was perceived as neither at fault nor as wanting to maintain his or her behaviour.

Concepts of Change

Grade 2. Almost one third of the children believed Corry's personality would not change. Twelve children had said he would change "when his legs get better". When asked what would happen if his legs always had this problem, half said he would never change.

Almost half of the children suggested Corry would change by "trying harder" or "trying to learn to do things better". Several children perceived his behaviour as a function of factors other than his condition, implying that
change would be easy. For example, one child explained,

He's mad-- because he feels angry because his legs are broken so he's dropping things on purpose. He has to get happy so he'll stop doing that.

Most children suggested being more careful, practicing things over and over again, trying to learn special tricks with his crutches to entertain classmates. One child thought if Corry got a pet for his birthday, all his problems would disappear. Once again, the emphasis was upon internal forces as means to change in most children's explanations.

**Grade 4.** One third of grade 4 children said Corry could not change. Four said he would change "when he doesn't need the crutches any more"; they all decided, when asked about the effect of a permanent condition, that Corry probably would not change.

Another third suggested that Corry could change with the help of others. Friends who played special games with him, gave him rides, and generally encouraged him would help him to become a more self-confident, happy person. This orientation toward help from others distinguished grade 4 children from those in the other grades.

A few children expressed the kinds of solutions more common among grade 2 children, such as practicing a great deal or outgrowing his moods. As one child put it,

When he's older, about 20, he'll be happy because when you're older, you realize things more...you understand things more because you've lived longer. That's what my mom tells me.

**Grade 6.** Grade 6 children contrasted dramatically with grade 4 children in focusing upon Corry's need to work hard to adapt to his handicap. Over one half of the children spoke only of working hard, practicing, discovering things he could do and perfecting his skills in those areas, not letting himself become discouraged. This orientation differs from what might be ex-
pected from children who had noted the role of the environment in contributing to Corry's behaviour.

Only two children suggested help by others and five suggested other people might play some role in Corry's change, but that role would be secondary to the effort Corry himself must contribute. Grade 6 children appeared to be expressing an attitude often expounded by adults which discourages dependency and stresses self-reliance.

**Difficulty of Change**

Almost all the children in grades 4 and 6 believed it would be difficult for Corry to change; only one third of those in grade 2 did. "Just practice" was the typical response of a grade 2 child. Practicing was assumed to eliminate not only Corry's physical awkwardness, but also his "sad" feelings. Many of the older children, especially those in grade 6, noted that if Corry was always crippled, he would have constant reminders of his limitations. The grade 6 child's awareness of the role of the environment in making change difficult often followed his or her belief that change would come about through effort. Apparently this did not represent a contradiction to the children. Effort, despite stressful environmental conditions, was expected and respected.

**Summary of Children's Interpretations of Corry's**

The crippled child was perceived relatively similarly across the grade levels. Except for six grade 2 children who were unable to identify Corry's problem, all children described plausible causes for Corry's condition. Grade 6 children, in contrast with the others, noted the role other people played in contributing to Corry's feelings. None of the children thought Corry was at fault, nor did they think he wanted to engage in his present behaviour.

Many children in grades 2 and 6 felt Corry should try hard to adjust to his situation while grade 4 children most often mentioned that help from others
would facilitate change. Most grade 2 children thought change would be easy while children in grades 4 and 6, expressing a greater understanding of Corry's behaviour, realized change would be difficult.

Les

Description

An anxious, self-deprecating child, Les feels her work is poor despite the teacher's reassurance. Although Les complains to the school nurse of feeling terrible, the nurse says there is nothing wrong with her. Les feels certain a group of classmates will not include her in a hopscotch game, and when they ask her to join them, she expresses doubt about her ability to play well. Although her classmates perceive her performance as good, she is dissatisfied and says she can never do anything right. (See Appendix E.)

General Response

In all grades, comprehension scores on Les did not differ significantly from those on Corry or Sandy. The mean comprehension score for Les in each grade was the highest or the second highest score for all the characters. Relative to the other characters, then, Les was well understood. Except for one grade 2 child who was unable to grasp Les's problem at all, all children expressed Les's behaviour adequately.

Les received the third highest favorability score, significantly lower than those of Chris and Corry. Many children expressed negative feelings and impatience with Les's behaviour during the interview, an attitude not expressed in discussions of Corry and only occasionally in discussions of Chris. Thus while children seemed to identify Les's problem accurately, they were not sympathetic to her behaviour. This combination of high comprehension and low favorability will be discussed later at greater length.
Concepts of Etiology

Grade 2. Grade 2 children demonstrated no clear pattern in their ideas for etiologies of Les's behaviour, although they showed a greater tendency to believe she was "born that way" than either of the other grades did. Sometimes, the behaviour was obviously incomprehensible to the child, and to ascribe it to innate forces was a last resort. The following exchange exemplified this reasoning:

He didn't think he had any friends. (E: Why did he think that?) Because he didn't think that he could do anything right. (E: Well, what made him think he couldn't do anything right?) Because he didn't have any friends that told him he was good. (E: Oh. Well, why didn't he have any friends to tell him he was good?) Maybe he was just born that way. (E: What was the matter with him when he was born?) He was born the kind of person who thought he'd never be good at things.

The innate condition, in the mind of a seven year old, was associated directly with the individual's specific behaviours. Just as Chris was born "not understanding stuff" and Corry was born sad, so Les was born "thinking she wasn't good at stuff".

Children at seven years of age have already begun to associate feelings and behaviour, including non-organically based behaviour, with the brain or head. Four children described accidents in which Les hit or bumped her head. One child explained that "she bumped into someone and hit her head so she lost her memory and she forgot she is good at stuff." Another child described Les as a person with "a nervous brain".

Over one third of the children's responses suggested self-induced etiologies: "he learned it from his friend", "she got curious to try it", "he did something once and thought he'd always be wrong after that". The behaviour, according to these children, emerges completely from within the individual with no environmental involvement.
The direct associations of etiology and behaviour again reflected the egocentric reasoning of the young child. The "it" from the above two quotes suggested the children conceived of Les acquiring a specific behaviour. Alternatively, the children suggested that one experience might have brought about the behaviour. None of the children abstracted from the cartoon strips to a general life condition which might have produced a person like Les.

Grade 4. Almost all grade 4 children thought Les's behaviour was self-induced. Experiences of failure, rejection in friendships and lack of ability to accept the praise of others were the themes of the children's explanations. In each case, the emphasis was upon the inappropriateness of Les's perceptions rather than upon the trauma of the experience. The children often made excuses for the reactions of others to Les, thereby absolving them of blame and focusing upon Les's behaviour as irrational. For example, one child said,

She asked someone to play and they said no, so she thought she was a bad person. She thinks too much about herself. Probably the other people were playing a game that couldn't have any more people.

Three children thought Les's behaviour was based on an innate condition. They suggested she was born, for example, "the kind of person who wants to be perfect". The question of how a person could be born with that quality was not resolved by any of the children. It is difficult to determine whether the children actually believed the quality could be innate or whether they simply could think of no alternative way to explain the behaviour.

Only a few children placed more emphasis upon what others had done to Les than upon Les's thoughts. These responses concerned cruel peers who continually told Les she was no good. No child mentioned parents.

Grade 6. Almost two thirds of the children emphasized the role of others, especially good friends and parents, in influencing Les's development. Criticism, failure to perform up to expectations, and comparisons with siblings were
common themes, even though none of these ideas was suggested in the strips. Although parents were never mentioned by younger children, grade 6 children frequently attributed Les's problems to parental influence. This finding lends support to the F scale of the questionnaire in which older children tended to perceive neurotic behaviour as caused by familial influences.

Over one third of the children emphasized the fact that Les's behaviour was an overreaction or an inappropriate response and therefore fundamentally self-induced rather than other-induced. The attitude toward Les expressed by this group was, in contrast with other grade 6 children, obviously unsympathetic. One child said:

Some friends were teasing her, telling her her project was not good. She just believed them, but that was dumb because they were just pretending and she kept on believing it even after they stopped.

Once again, children excused the behaviour of others which might have contributed to Les's behaviour.

**Perceptions of Control**

The older the group, the more likely it was to find Les at fault for her behaviour. Fewer than one third of the grade 2 children, in contrast with over half the children in grades 4 and 6, thought Les was at fault. Some of the children in grade 6 who had described an other-induced etiology now ascribed fault to Les. A typical explanation was,

Well, she's the one who's still doing it...she's acting like that even though she doesn't have to.

This reasoning was based upon the perception that Les's behaviour continued despite the reassurances of teachers and peers and upon the belief that she could control her own behaviour. Unlike Corry who had physical limitations or Chris who had mental limitations, Les had no ostensible limitations. As one grade 6 child expressed it, "She's acting that way because she's stupid...but really she's very very smart."
Most of the children in each grade did not believe Les actually wanted to engage in the illustrated behaviour. The reasons given for continuing the behaviour were relatively equal across all grades, although the tendency to perceive Les as "not trying hard enough" decreased slightly with age.

Children's answers frequently became inconsistent at this point in the interview. Either of the following would represent a consistent response:

<table>
<thead>
<tr>
<th>Etiology</th>
<th>Fault</th>
<th>Wants to behave this way?</th>
<th>Why continues the behaviour?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-induced</td>
<td>At fault</td>
<td>No</td>
<td>Not trying hard enough to stop</td>
</tr>
<tr>
<td>Other-induced</td>
<td>Not at fault</td>
<td>No</td>
<td>Can't help it</td>
</tr>
</tbody>
</table>

However, the patterns emerging, based upon the majority of responses, were as follows:

<table>
<thead>
<tr>
<th>Etiology</th>
<th>Fault</th>
<th>Wants to behave this way?</th>
<th>Why continues the behaviour?</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 Self-induced</td>
<td>Not at fault</td>
<td>No</td>
<td>Not trying hard enough to stop</td>
</tr>
<tr>
<td>4 Self-induced</td>
<td>At fault</td>
<td>No</td>
<td>Not trying hard enough to stop</td>
</tr>
<tr>
<td>6 Other-induced</td>
<td>At fault</td>
<td>No</td>
<td>Can't help it</td>
</tr>
</tbody>
</table>

The concepts of etiology and of why Les continued her behaviour were consistent; however, the ascription of fault was inconsistent for grades 2 and 6 with the other parts of the responses. While this pattern is based upon the majorities of responses rather than upon individual patterns, it nevertheless suggests that while children increasingly perceived the environmental contributions to Les's behaviour as they get older, they also increasingly ascribed fault to her. The behaviour was not considered within Les's control and yet she was at fault. These ideologies for both grades 2 and 6 reflected children's
attitudes about etiology and responsibility for neurotic behaviours. This will be discussed in the section concerning general grade differences.

Concepts of Change

Grade 2. A majority of grade 2 children suggested either that Les should "try hard" or that she would outgrow the behaviour. Those who suggested Les "try hard" were not focusing upon efforts to be self-satisfied but rather upon efforts to do better work which would lead to greater happiness. For example, one child said,

Some day, she'll just try and try and try and then she'll do it perfect. Then she'll be happy and she won't think she's terrible.

Although they had identified the problem correctly and had sometimes been quite perceptive, saying "She doesn't like herself", or "She thinks she's no good.", those same children had not recognized the paradox of being "good" and yet not being able to acknowledge it. As a result, they assumed only "perfection" would satisfy her.

The children who proposed that Les would grow out of her behaviour expressed the delightfully optimistic theory that adults simply do not act foolishly. One bright child explained that

he'll stop doing that when he gets older. (E: Why will that happen when he gets older?) Because he'll be older and he'll understand things better. Things are easier when you're older and smarter.

As in the case of Chris, it would be interesting to hear children's explanations of adult neurotic behaviour.

Those who suggested Les's need for other-initiated help generally believed that other people, by repeatedly telling Les that she is good, would change her. The cartoon included unsuccessful efforts of both teacher and peer to allay Les's anxieties with positive reinforcement, but the children were not perturbed by this. Their reasoning, from their perspective, was
completely logical. The following exchange illustrates this tight reasoning:

They'll tell her lots of times that she's good, over and over again. (E: In the cartoon, you can see that the teacher tells her she's done good work, and here, her friend told her she played a good game. Do you think Les can change with people telling her she's good over and over again?) Yes, I'm sure she will. See, here, she thinks they just feel sorry for her because she might lose. (E: Do you think Les might think everyone who tells her she is good is just feeling sorry for her?) No, because she'll ask them if they feel sorry for her and they'll say no and she'll believe them.

As with their reasoning about Corry and Chris, the grade 2 children shaped Les's situation to fit their perceptions, sometimes obviously distorting Les's behaviour.

Grade 4. Over a third of the grade 4 children proposed a "try hard" means of change, but the largest group suggested other-initiated help. In contrast to the "try hard" solutions of the grade 2 children, the grade 4 children suggested efforts at self-reflection, working to convince herself that her behaviour is appropriate; Les should keep telling herself that she is good. The children's shift from an emphasis on efforts to perfect herself to an emphasis on self-examination marked the beginning of a realization that Les's behaviour is inappropriate.

The largest percentage of responses fell into the other-initiated help category. Once again, there was a qualitative change from the grade 2 responses. Children now were not simply suggesting that peers tell Les she is good. The children seemed to recognize that such an approach would not be effective. They had many thoughtful suggestions about how to raise Les's self-esteem: letting her win games or elections, making her feel she is needed, giving her a book in which a character behaves as she does so that perhaps she'll recognize herself and think about her behaviour. One child proposed that Les be confronted by someone she respected. Parents, interestingly enough, were not mentioned.
Grade 6. The greatest number of responses of grade 6 children fell into the "try hard" category. Again, the focus upon efforts was qualitatively different from that suggested by grade 2 children. Grade 6 children emphasized Les's need to think about herself and the reactions of others to her.

The data did not indicate that all children at this age recognized the irrational nature of Les's problem, although a surprising number did appear to interpret it at an adult level. The less sophisticated child thought Les should "change her thoughts" or "people should get mad at her for being stupid". Others, however, saw far beyond the obvious behaviours to Les's needs:

It doesn't really matter what other people say to her if her parents still don't love her. She needs to know they do. Maybe they say they do but they never show it.

The increasing awareness of the role parents play in a child's problems parallels some aspects of the child's moral development. As children come to recognize the fact that rules and laws are not absolute, they also begin to question the moral superiority of authority (Kohlberg, 1972). Similarly, adults are no longer perceived as flawless, and children can imagine and describe the problems parents can create for children.

Difficulty of Change

The majority of grade 2 children thought it would be easy for Les to change. The etiology and the cure are both perceived as internally controlled; therefore changing the behaviour should be easy. If a bump on her head caused her memory loss, another bump will revive her memory. If someone saying "You're no good" caused her behaviour, someone else saying "You're good" will change it.

The older child appears to have evolved to a new stage of thinking about problems, suggested by grades 4 and 6 children's awareness of the reasons why change is so difficult. As one child noted maturely,
It'll be hard for her to change because maybe she just isn't good at some things and that will keep reminding her. But no one is perfect and she'll never be either.

Summary of Children's Interpretations of Les

Grade 2 children most frequently perceived Les's behaviour as self-induced. Although the children did not believe Les wanted to engage in the behaviour, most children felt the behaviour continued because Les did not try hard enough to stop. Logically, Les could change simply by trying hard to become perfect or she would outgrow the problem.

For the majority of grade 4 children, Les's behaviour was self-induced and her behaviour was her own fault. She did not really want to continue her behaviour but she was not trying hard enough to stop. She could change if people helped her or if she tried hard to stop behaving so inappropriately.

Other people induced Les's behaviour according to most grade 6 children; but the majority of children also believed Les's behaviour was her own fault. They tended to believe that Les did not want to engage in her present behaviour but she could not really help it. Change would come about through self-reflection or reinforcement from others.

In general, neurotic behaviour was described relatively well, but rated less favorably than either crippled or retarded behaviour. By grade 4, children have developed more complex systems of causality than the younger, egocentric children. This cognitive flexibility permits the older child to integrate the inconsistencies of the neurotic behaviour without distorting it as the younger child does.

At the same time, conformity to "majority or 'natural' behaviour" has also become of importance to the child, and intentions have become a basis of evaluation (Kohlberg, 1972, p. 164). The neurotic behaviour which deviates from norms is judged more harshly, and fault is ascribed to the
individual for the behaviour. Most children did not perceive the neurotic behaviour as intentional. However, the oldest group, who were the most likely to think the neurotic individual could not help her behaviour, were also the most likely to ascribe fault to her. A consideration of intentions, therefore, which might have tempered a child's evaluation of normal behaviour, did not appear to have that effect with respect to neurotic behaviour.

Sandy

Description

Sandy is an autistically withdrawn child who both in the classroom and in the schoolyard avoids participating in peer activities. In the classroom, she stares at a pencil and seems to be daydreaming rather than joining classroom activities. Without responding, she walks away from a child who asks her to join in a schoolyard game. She engages in autistic speech behaviour both in response to a teacher's question and when alone. (See Appendix E.)

General Response

Sandy's comprehension scores did not differ significantly from those of Les or Corry at any grade level; for grades 2 and 4, Sandy's comprehension score was the highest score for the grade (although in grade 4, that position was shared with Les). Many children commented thoughtfully and relatively knowledgeably on Sandy's behaviour.

Sandy's favorability rating, however, was significantly lower than those of all the other characters. This finding is not surprising; Sandy's behaviour is the most antisocial and bizarre of the characters, and psychotic behaviour is possibly the most rejected of all noncriminal behaviours in this society. The relationship of relatively high comprehension to relatively low favorability will be discussed later at greater length.
Concepts of Etiology

Grade 2. The majority of children mentioned ideas concerning being new in the school, being excluded by peers, learning the behaviour from others. The emphasis, in most cases, was upon the idea that Sandy's behaviour was self-induced. Even when the actions of others may have contributed originally to Sandy's behaviour, children perceived it as maintained by Sandy's own thought.

Over one quarter of the grade 2 children thought Sandy's behaviour began at birth, and three children suggested Sandy was "mental". Children's elaborations of their "born that way" responses commented on Sandy's explicit behaviours only. The children, whose thinking was tied to the immediate stimulus of the cartoon strip, were unable to imagine situations apart from those presented. For example, when asked what was the matter with Sandy when she was born, a child said, "She was always sitting alone and not paying attention and saying silly things".

A few children suggested organic problems, a sickness that "she got from someone else", an "undeformed brain" or a "mental thing" which meant "she doesn't hardly know what the kids are saying and she doesn't know how to play games."

Two children combined social and physical factors to explain the unfamiliar behaviour. One child explained that Sandy was teased and then bitten by a dog. "right around the brain, and that gave her a brain damage." The other suggested.

When she was a baby, she got hurt, maybe she fell out of her crib. But then when she was three and she was listening and someone said something mean about her so she decided to be mean and only talk to herself forever.

These responses reflected thoughtful attempts to make sense of autistic behaviour. Sandy's behaviour does not conform with behaviour generally associated only with physical disorders; yet neither does it seem like behaviour which would result solely from an unpleasant social experience. Neither of these
descriptions was suggested in the cartoon strip. However, the first child had been bitten on the face by a dog and the second child had been told by her mother that she had fallen from her crib as an infant. This again illustrates the young child's egocentric orientation in the interpretation of behaviour in others. The child assimilates her or his perceptions of the world into her or his existing schemas of social understanding, regardless of how distorted the original situations become in the assimilation process.

Grade 4. A few grade 4 children thought Sandy's behaviour had been innate, but the majority described self-induced etiologies. About a third focused upon other-induced etiologies.

The few children who believed Sandy's problem reflected an innate condition differed from those in grade 2 in the way they expressed the condition. Whereas grade 2 children had assumed Sandy as an infant displayed all her present behaviours grade 4 children tried to abstract from the cartoon strip and to describe innate behaviour patterns which might evolve to her present behaviour. Children suggested that when Sandy was born she "just always liked to be quiet" or "had feelings that got hurt very easily".

Several grade 4 children described traumatic events as causes of Sandy's behaviour; some children were sympathetic and emphasized the effect of the event on Sandy, while others stressed that Sandy, by holding onto the past event, was inducing her own problem. The traumatic events included the theft of a precious possession, being badly beaten, being teased in front of others, having unkind rumors spread about her. But whereas many of these children had been sympathetic to the traumas of Chris or Corry, they now seemed impatient with Sandy's unwillingness to relinquish feelings about a past experience. This intolerance is illustrated by the following comment:
She's a weirdo. I think she got teased, a long time ago, in front of a lot of people. Maybe her best friend was there and she was laughing too, so Sandy got very upset. But then she just kept holding on and holding on to her upset...gee, everyone gets teased sometimes. She should just forget it.

**Grade 6.** Children of this age clearly found Sandy the most difficult character to discuss. Many interviews began with a comment indicating the child's confusion or discomfort. "I don't know how to explain this" or "I know there's a word for this but I can't think of it" were common kinds of expressions. Some children mixed physical concepts with emotional ones:

She's a bit weird, talking to herself. It's like she's crippled or something...she doesn't talk with other people, doesn't get involved. I think she's probably crippled because crippled people are weird like that, talking to theirselves.

A small number mentioned birth defects or retardation. The birth defect, explained one child, was the inability "to feel her own feelings". Another child described a parentally-induced retardation. While they appeared to have more ideas about the causality of autistic behaviour than younger children, many children this age still seemed confused and alienated by the behaviour.

Most children described other-induced etiologies with the largest number of children blaming parents who spoiled, rejected, ignored or mistreated her. Two children conceived of Sandy's behaviour as a retreat to a fantasy world. They demonstrated an ability to infer feelings of alienation or withdrawal from Sandy's behaviour. Both children showed compassion for Sandy. One of the children described Sandy thus:

Something happened in his life...it's hard to describe...maybe he had a good friend and the friend started to bug him and he got all upset and kind of wanted to get the guy back and he just started thinking of how it would be and he got all dreamy and he thought of things...when things like that happen you think about being a king and what would happen with the person if you were a king. That's what probably happened to Sandy and he thought it was good to be that way...he was happier in his dream world, so now he's living there all the time.
Perception of Control

Increasingly with age, children perceived Sandy as being at fault, as they had Les. More than half of the grade 6 children as opposed to one third of the grade 2 children said Sandy was at fault. The ascription of fault to Sandy reflected an incongruence in thinking, in view of the emphasis on other-induced etiologies posited by the children. All the children who espoused an interpretation of the behaviour as parentally induced also said they believed Sandy was at fault. The common response to the question of fault was, "Yes, of course it's her fault. It's her choice, and she's the one who's doing the walking away and she's the one who's talking weird."

Several grade 6 children perceived Sandy as unaware of her behaviour. Each of those children had also perceived Chris as unaware and had also suggested organic bases to both behaviours. None had ascribed fault to either Sandy or Chris. For these children, an organic etiology absolved a person of responsibility for behaviour and suggested that the individual may not be aware of his or her actions.

More than one half of the grade 2 and 4 children did not believe Sandy wanted to engage in her behaviour. Most children reasoned that she could not help herself, although grade 2 children were more likely to believe she was not trying hard enough to stop her behaviour, illustrating their emphasis upon the internal control of behaviour.

However, in contrast with their perceptions of all other characters, almost half the children in each grade believed Sandy did want to engage in her behaviour. Most believed Sandy maintained the behaviour to get attention. Although almost all children identified Sandy's feelings as "sad" and/or "lonely", they nevertheless believed she wanted to maintain her behaviour. On the one hand, they recognized a sadness in her, a quality not directly manifested in the cartoon strip. On the other hand, the children could not accept the idea
that such flagrantly anti-social behaviour was involuntary.

**Concepts of Change**

**Grade 2.** Two thirds of grade 2 children suggested that Sandy should "try hard" to change or that she would grow out of the behaviour. Children generally thought something would happen, someone would ask her to dinner or to play a game perhaps, and Sandy would simply, magically, change. Clearly, most of the children did not have any sense of the severity of the problem. One child proposed that "in 10 or 20 years she'll suddenly forget all about being that way". Once again, young children seemed to have an image of adults as paragons of psychological adjustment; surely an adult would never behave so strangely.

Children who had proposed organic bases for Sandy's behaviour tended to suggest medical cures. If Sandy went to a doctor, he might "change her from being a little mental" or "look in his throat": The latter comment was explained as follows: 'Maybe he swallowed something when he was little and that was what made him talk and act funny." This medical orientation, as noted in the discussion of the M scale, had largely disappeared by grade 4.

Those children who had included self- or other-induced causes posited one-event cures. Just as the etiology of the behaviour was a brief, one-experience occurrence, so too was the "cure" a one-event experience. For example, "Someone will ask her out to dinner and she'll go and have a great time." This conception of personality as a series of discrete moments rather than as a process appears to be typical in the thinking of children this age.

**Grade 4.** Many of the grade 4 children's responses illustrated a new kind of thinking about change from that of grade 2 children, although some suggested the grow-out-of-it and one-event "cures" typical of grade 2 children. Most children at this age were beginning to think about the environment and how
Sandy might benefit from changes in her surroundings. Many children suggested going to a new school to get a fresh start or going to a special school; others thought with children's encouragement and morale-boosting support, Sandy would gradually change over time. Several children also noted that Sandy could not survive as an adult without changing her behaviour. The role of the environment was again central. As one child expressed it.

It's OK to be like that now, but when she grows up and has a job, she'll need gas to get to work and when she goes to a gas station, she has to talk right.

Grade 6. At the grade 6 level, children seemed to swing back to focus on effort as the major factor in changing. The largest number of children described situations in which Sandy would have to make the first efforts herself and would then need reinforcement from her environment for the efforts.

Many of the children who believed Sandy simply needed to "try harder" seemed almost surprised at the question of how Sandy could change. The responses were brief: "ignore her parents", "make herself do stuff", "just make an effort to play with them".

Almost every child who suggested self-initiated change had presented an other-induced etiology. A child who said 'Sandy's parents had ignored and rejected her suggested that she "try to play with other people and enjoy life...she should realize her parents were wrong". Another who thought Sandy has been annoyed by other children "Maybe every day for a year" now said "She should have fun...it's her decision. She can be however she wants now." The children held Sandy responsible for her behaviour now, regardless of how they had perceived her past experience.

Difficult of Change

The patterns of responses on the question of difficulty of change were similar to those for Les. Many grade 2 children thought change would be easy.
For many of them, Sandy's behaviour was voluntary, so change would only involve small efforts; changing was simply a matter of wanting to change. By grade 4 children expressed a different conception of the difficulty of change. They considered the role of the environment in changing and they recognized that effort alone would be insufficient. While placing more emphasis on effort than grade 4 children, grade 6 children also acknowledged that change for Sandy would be difficult. Many grade 6 children noted that environmental factors might impede Sandy's efforts. A perceptive child commented that change would be difficult because, even after she had changed, other people would continue to discuss her past behaviour.

Summary of Children's Interpretations of Sandy

Most grade 2 children perceived Sandy's behaviour as self-induced, although they did not believe it was her fault. Many thought her actions either suggested she was not trying hard enough to stop or reflected an attempt to attract attention. She could change solely through effort or, alternatively, she might outgrow her behaviour.

While the majority of grade 4 children believed Sandy's behaviour was self-induced, many also thought it was other-induced. For the most part, the behaviour was not perceived as her fault. Children either believed Sandy could not help her behaviour or believed she wanted attention. Other peoples' help was the method of change most frequently suggested.

According to most grade 6 children, other people's actions caused Sandy's behaviour. The children tended to perceive Sandy as at fault for her behaviour, and most of the children believed that the behaviour was voluntary. Her own efforts, reinforced by other people, would make it possible for her to change.

In general, autistic behaviour, like neurotic behaviour, was understood fairly well but evaluated quite negatively. Although sadness was not expressed
directly in the cartoon strips, children even at very young ages inferred unhappiness from the autistic behaviour. Yet the children were critical of the behaviour because, like neurotic behaviour, autistic behaviour does not conform to standards of acceptable, normal behaviour. For older children who judge behaviour upon intentions, the critical interpretation may be based on the belief that the individual wishes to engage in withdrawn behaviour. As with a neurotic individual, a person displaying psychotic behaviour does not appear to have any overwhelming limitations which made the behaviour necessary or explicable. In contrast with a physically handicapped individual whose inappropriate behaviour might be excused, the psychotic individual is likely to be held responsible for his or her behaviour. This may suggest that children place psychotic behaviour into a category with criminal behaviour rather than into a category with other kinds of handicapped behaviour when they judge the extent to which an individual should be held responsible for her or his behaviour.

**General Grade Differences**

The responses discussed revealed both differing interpretations of the various handicapped behaviours as well as several shared pattern responses among the behaviours. In the interpretations of causality and change of handicapped behaviour, the responses to all the characters supported developmental patterns. Responses to the autistic and neurotic behaviours indicated a developmental pattern concerning concepts of fault and responsibility. A third developmental pattern involves the idea of an individual's lack of awareness of his or her own behaviour which emerged in grade 6 children; this applied only to responses to Chris and Sandy.

**Causality and Change**

The seven year olds, ignoring environmental factors, perceived behaviour
as self-induced. Behaviours tended to be viewed as actions rather than reflections of personalities, and actions represented conscious desires or needs on the part of the character. Children at this age also reasoned that the characters could change either by "trying hard" or by "growing out of it". The change that would come about through either method applied to one specific behaviour rather than to the total person.

The seven year old child's focus upon the internal forces both in etiology and in change suggested egocentric thinking. Like the animistic reasoning of the pre-operational child, the child assumed actions represent the will of the actor. The child based her or his descriptions on the immediate perceptual experiences provided by the cartoon so that she or he could only conceive of the character as it was explicitly presented. Yet, the child's own perspective dominates his or her responses and may distort the objective situation. Children in grade 2 often twisted the characters' behaviours or situations to fit into their own schemata of social understanding. Inconsistencies which resulted from the distortion of the objective situation, even when directly mentioned to the child, did not threaten the child's logic. As Piaget (1950) has noted, "the coercions of other people would not be enough to engender a logic in the child's mind (p. 162)".

Psychological causality for the nine year old was also focused upon the self, but not to the exclusion of the environment. Factors in the environment contributed to an individual's behaviour. However, the major emphasis was still upon the individual's own perceptions, in the interpretations of the nine year old. Change, many children as this age believed, would come about through unsolicited assistance and support from the individual's environment. While they had not yet recognized the significance of the environment in creating behaviour problems, many grade 4 children did perceive the environment as
the major agent in making change possible.

The grade 4 child's reasoning reflected a natural progression from that of the grade 2 child. The dramatic changes both in the interview data and in the questionnaire responses suggested that the period between grades 2 and 4 may be a transitional period for the assimilation of much information about psychological causality. Other investigators have also found the shifts at about these ages quite remarkable in the area of interpersonal understanding (Flapan, 1968; Rothenberg, 1970; Whiteman, 1967).

The shifts in responses from grade 2 to grade 4 reflected both social and cognitive development which have taken place during these years. The emerging identification of environmental factors in children's interpretations may reflect increasing involvement in helping activities. The "helping" ethic is stressed both in and out of school; children are expected to help more at home than previously and are likely to be encouraged to be sensitive to the needs of others. The Catholic schools place especially strong emphasis on charitable acts and helping others.

Children are now less egocentric in their thinking. The dramatic increase in children's ability to abstract from the cartoon strip a life for the character and to refrain from assuming his or her own life experiences are equivalent to those of the characters reflects a change in the child's role-playing capacities. Change is no longer perceived as "easy" and simply a matter of "trying hard"; rather, the child can recognize, even though she or he has not experienced the character's problem, that change is often extremely difficult.

Recognition of the role of the surrounding environment in the etiology of a behaviour is not fully within the child's reasoning until grade 6. Now the child conceives of behaviour as a reflection of the individual who emits it and perceives the individual as a product of an environment which has gradually
shaped him or her. Parents, peers, teachers are central themes in etiological explanations; parents are no longer regarded as too perfect to be involved in contributing to a child's problems.

Changing, which grade 4 children had so charitably thought necessitated help from others, is thought to depend upon self-reflection and self-initiated help. This shift is not a regression back to the "try hard" solution of the grade 2 children, but definitely places considerable responsibility upon the individual for bringing about change in her or his own life.

The suggestion of self-reflection as a method of change illustrates the development of abstract thinking in children. Younger children described tangible, visible methods of change. The notion of an individual's own effort as a channel of change represents the simplest relationship between a problem and a solution. No intervening factors are necessary. Help from the environment is somewhat more complex, involving more individuals and a slightly less direct relationship between the problem and the solution. Self-reflection, however, is considerably more abstract and implies an ability to role-play, to step outside oneself and view one's own behaviour. The progression is therefore from an egocentric perspective of change to an abstract one. Secord and Peevers (1974) have noted that a reflective view of the self is absent in young children but emerges gradually between grades 4 and 11.

The reversal between grades 4 and 6 of the role of environmental factors in causality and change may be partially accounted for by socio-cultural factors. Grade 4 children espoused self-induced etiologies which, logically, might suggest self-initiated change. As noted, however, grade 4 children tended to suggest other-initiated change. Grade 6 children, who described other-induced etiologies, might have been expected to suggest other-initiated change. However, they generally discussed efforts in self-reflection and
self-initiated other-reinforced change. These patterns may be interpreted several ways.

The grade 6 child's emphasis upon self-reflection rather than help from others may reflect the increasing internalization of prevalent societal attitudes toward many emotional problems: "Sure he comes from a lousy neighbourhood and a lousy family, but he ought to just pull himself up by his bootstraps and make something of himself." The admiration many adults have for the individual who rises over a problematic background is seldom commensurate with the sympathy offered to the same individual who, despite efforts, has not been able to make the same successful adjustment.

Because the sample was from Catholic schools, several religious factors may also be important determinants of these attitudes. The "God helps those who help themselves" belief which is emphasized in these schools stresses the responsibility of the individual to be self-reliant. The older children are, the more thoroughly ingrained this attitude would be. Grade 4 children, the middle age group in the school, are in a position of being helpers to the younger children and of being helped by the older children. Grade 6 children, in contrast, are among the oldest children in the school and have many more responsibilities. Self-reliant behaviour is likely to be encouraged in many of the large families of these children. The average number of children in each family in the sample was five; no eleven year old was a youngest child, and many were among the oldest children in the family, with, probably, the accompanying expectations of being independent and self-helping.

Fault and Responsibility

Patterns in the ascription of fault apply only to the neurotic and autistic characters. Of the four characters, these are the two which might be classified as emotionally disturbed. Whereas Corry and Chris were seldom
considered at fault for their behaviours, both Les and Sandy were often perceived as at fault, especially by grades 4 and 6 children. More grade 4 than grade 2 children believed each of the characters was at fault, although the grade 4 children perceived change as less within the characters' control than grade 2 children did. The grade 6 children were the most likely to perceive Les and Sandy as at fault, even though they had perceived the causes of both characters' behaviour as other-induced. Thus, while concepts of causality shifted from self- to other-induced as children grow older, children also increasingly ascribed fault to an individual for his or her behaviour regardless of the cause of the behaviour. This finding is perhaps unexpected because as children increasingly emphasize the environment as causes of behaviour, one might expect them to be less likely to hold an individual responsible for her or his behaviour.

This pattern may be interpreted as a manifestation of the child's emerging concept of responsibility. The grade 2 child, with little sense of obligation to anyone, does not think of behaviours in terms of responsibilities. The phrase "I couldn't help it", in the young child's mind, excuses him or her from the responsibility for any actions which might be unacceptable. As the child gets older, she or he increasingly perceives other individuals as responsible for their actions; presumably she or he is increasingly expected to account for her or his own behaviour and relies upon others to do the same. Behaviour which does not conform to norms and which does not have any obvious basis for nonconformity is considered the responsibility of the actor and judged especially harshly.

The grade 6 child's ascription of fault to Les and Sandy indicated a belief that the characters must accept responsibility for their behaviours,
regardless of the etiologies hypothesized for the behaviours. As Olmsted and Durham (1976) noted, college students "are exceedingly reluctant, or unable to give up the notion of individual responsibility for actions when there is no apparent biological or physiological "cause" for aberrant behaviour (p. 43)". Thus, the emerging attitudes of the children in this sample reflect the popular attitudes toward emotionally disturbed behaviour in adult society.

Awareness of One's Own Behaviour

A third pattern, supported by a small but significant number of children, concerns the emerging idea of lack of awareness of one's own behaviour. No grade 2 children suggested that any of the characters might not be aware of his or her behaviour; eight grade 6 children did so. The grade 2 child must logically connect an action with a conscious motivation. Behaviours are interpreted as reflections of the will of the individual. The young child assumes that her or his own behaviours are intentional and similarly that the behaviours of others are regulated in the same manner.

Increasingly, the child's cognitive need for an obvious relationship between conscious mind and behaviour becomes less important. Children can interpret behaviour which may not reflect the will of the individual; it is no longer necessarily illogical. Finally, the child can conceive of behaviour which is not associated with any conscious motivation within the individual. The grade 6 child's hypothesis that an individual may be unaware of his or her own behaviour expressed the child's capacity to conceptualize behaviour distinct from conscious thought.

The concept of unconscious motivation or unconscious control of behaviour is central in the field of psychopathology. Several authors have noted the emergence of this concept in children's thinking during the elementary school years (King, 1971; Whiteman, 1967). The child's growing ability to understand
the behaviour of others in this kind of framework implies a readiness to understand some of the complex and intuitively uncomfortable aspects of behaviour.

At the grade 6 level, then, children are beginning to think in terms of unconscious motives and to ascribe fault. This study has not explored the relationship between these two trends. However, the negative attitudes of the public toward emotional disorders suggest that the ascription of fault takes priority over the mitigating factor of unconscious motivations, or at least that unconscious motivations do not absolve an individual of responsibility except in some legal situations. Further investigation of these two areas with older children would shed light upon the way people learn to resolve the paradox of unconscious motivation and responsibility in emotionally disordered individuals.

Cognitive and Affective Components of Attitudes Toward Emotionally Disturbed Behaviour

Despite the grade differences on most of the dependent variables, all the children shared a more negative attitude toward Les and Sandy than toward Chris or Corry. Because the characters were not labeled as "neurotic", "autistic", "crippled" and "retarded", the children's responses reflect attitudes toward the behaviours only rather than toward the explicit concepts. Sandy's behaviour although clearly anti-social, was nevertheless identified by children at every grade level as reflecting sadness or loneliness. Evidently, thinking that an individual is unhappy did not make the children feel more positively toward that individual.

Sandy's and Les's low favorability scores cannot be attributed to the children's lack of insight into the characters' problems; on the contrary, the
children's comprehension of both characters was relatively high. Without question, children were alienated by both characters, especially Sandy.

A child who has contact with a crippled or brain damaged individual may find the behaviour sufficiently foreign to question her or his parent and receive an explanation for the deviant behaviour. The same child, viewing a peer with emotional problems, may not seek an explanation from the parent because the abnormality of the behaviour is not so pronounced as to be outside the realm of the child's schemas of understanding. Anxiety can be interpreted as "attention-seeking"; withdrawal is perceived as shyness or simply "a quiet nature". The child perceives the emotionally deviant behaviour as he or she might perceive any emotional behaviour; however, because it is more extreme than most emotional behaviours, the child perceives it negatively with less tolerance than he or she might if he or she were more aware of the complexities of the behaviour.

Understanding of the behaviours, however, did not affect favorability. Although grade 6 children had significantly higher comprehension scores on both Sandy and Les than grade 2 children did, there was no difference in their favorability scores. There are several possible explanations for this finding. As children become more aware of the causes for emotional disorders, they also become aware of societal rejection of such behaviours. Therefore, as children learn more about the problems, they also learn how they are expected to react to those problems. As noted in the introduction, increased education or knowledge does not necessarily lead to increased tolerance.

Much of children's knowledge of other persons comes from active involvement with them (Secord & Peevers, 1974). Children depend upon being able to anticipate the actions of others. However, the disturbed child may be threatening precisely because his or her behaviour often cannot be anticipated.
Thus, children may have discovered from their own experiences that helping a child with emotional problems is more complicated than it may first appear to be. Les, for example, would be likely to need more continual reassurance and attention than Corry. Ultimately the needs of a disturbed peer might exhaust a child who originally might want to help. The "normal" child might conclude that he or she is unable to help the disturbed child and that the latter will have to help herself or himself. Further research is needed to determine the relationship between the cognitive and affective components of attitudes in children's judgments of emotionally disturbed behaviour.

Limitations and Implications

The findings of this study must be replicated and elaborated before a comprehensive picture of children's attitudes toward handicapped behaviour will emerge. A major limitation in the generalization of this study concerns the sample used. A group of public school children might provide different interpretations from those given by parochial school children. Other major limitations of the study concern the measures employed. The development of a more reliable measure to assess knowledge of mental health concepts is of critical importance before progress can be made in this area. In particular, the specification of children's concepts of the word "mental" and their distinctions between "mental retardation" and "mental illness" would contribute to a clearer understanding of children's associations with key mental health terms. Additionally, the use of more kinds of disturbed behaviours would elaborate upon the results of the present study. Children's interpretations of psychotic and neurotic behaviour in adults--behaviours associated with alcoholism, anorexia, compulsions, and schizophrenia, for example--would be of interest and would expand the limited perspective given by the small sample of disturbed behaviour used in this study. A more extensive measure of affective components of
attitudes toward disturbed behaviour would be valuable. Finally, a more thorough measure of intelligence would provide a more valid indication of the role of intelligence in children's attitudes in this area.

Although this study found many differences between interpretations at different grade levels, there was also considerable variability among children within any grade. The investigation of the social factors which might have contributed to these individual differences might involve testing children in families with one disturbed member or observing children's actions with peers manifesting disturbed behaviour. Level of cognitive and moral development, and role playing ability could be assessed to determine their relationships to children's attitudes. The investigation of these attitudes in groups of children with handicaps would provide interesting comparisons with the finding of studies with "normal" children.

Perhaps ultimately the most critical area of investigation concerns the effects of instruction about handicapped behaviour on children's attitudes. This research suggests that most children below grade 4 do not have the capacity to conceptualize psychologically complex behaviours. The grade 2 child is usually still too egocentric in his or her thinking to grasp the concept of emotionally disturbed behaviours. Thus, the extent to which experiences in the child's life influence her or his thinking is dependent upon the child's age. Campbell (1975) for example, found that the sophistication level of children's concepts of physical illness was influenced by the child's health history, but significantly more so among older children (over 9.5 years) than among younger children (under 9.5 years). Similarly, perhaps experiences with disturbed behaviour would not affect young children's attitudes toward the behaviour as much as older children's attitudes. Additionally, these behaviours may not be frequent enough in the young child's social environment for an
educational approach to be of significant importance.

By grade 4, however, children identify disturbed behaviours and recognize the need for environmental help to modify them. The children's concepts of causality are still somewhat simplistic, although they appear to be in a transitional stage which suggests that children's conceptions might be modified with education. Several investigators have noted that role-playing, at an appropriate age, can change children's moral values (Arbuthnot, 1975; Kohlberg, 1972). The experience of role-playing itself, as Flavell (1968) has suggested, may increase children's interpersonal awareness and improve their abilities to communicate with others.

By grade 6, children are beginning to find individuals at fault for their behaviours which, they say, are induced by others in the individual's environment. The onus of changing the unacceptable behaviour is placed upon the individual with much less emphasis placed upon the role environmental factors could play in the process.

Grade 5 may therefore represent an appropriate age for introductory discussions of facts and attitudes about handicapped behaviours, including physical, mental and emotional problems. The questionnaire data indicated that children of this age are becoming familiar with some of the mental health terminology and identifying the behaviour patterns as deviant. Obviously ten year olds are not ready for detailed explanations of deviant behaviour, but an educational process might start at this stage in the child's development and continue through high school.

A major new focus of mental health programs today is upon primary prevention, the devotion of time and funds to preventing the emergence of the problem in question. Primary prevention programs focus upon high risk populations or upon promoting positive mental health. This study has implications
for the second type of program.

The problem of public attitudes toward mental illness contributes to obvious societal conditions such as unemployment, crime, hospitalization and suicide as well as the less dramatic but no less important conditions of individual feelings of inadequacy, of being different and of alienation. As noted earlier, the modification of attitudes in adults is extremely difficult. Children automatically adopt the attitudes of their parents, especially in a society where those attitudes are prevalent. Intervention must occur during the school years, before attitudes and misinformation are firmly embedded in children's concepts of mental health phenomena.

This assumes that in children, knowledge will lead to compassion or that compassion can be taught. There is no way of knowing whether educational processes with children might shape or improve attitudes in this area. At this time, the topic of mental disorders is associated with ridicule and discomfort, and there is nothing to prevent children from continuing in their parents' path to acquire negative attitudes. Because children on their own are unlikely to become enlightened, mental health professionals must consider the modification of public attitudes through the education of children a priority.
SUMMARY

Investigations examining public reactions toward the mentally ill find that the public possess negative attitudes toward deviant behaviour and toward mental health labels. These attitudes appear to be learned early and are resistant to change. At the adult level, education with the goal of modifying these attitudes has not been effective.

In this study, young children's developing conceptions of mental health terms and their interpretations of handicapped behaviour were explored. The subjects were ninety children, fifteen boys and fifteen girls in grades 2, 4 and 6. All children were enrolled in two Catholic elementary schools in Vancouver, British Columbia. This age range was selected because children's attitudes are strongly influenced by both cognitive and social developmental factors during these years.

Two assessment devices were designed to measure children's attitudes toward mental health terminology and handicapped behaviours. A mental health concepts multiple-choice questionnaire assessed how much correct information the children at each grade level possessed and how some of children's concepts of mental health phenomena change over this age range. To assess children's interpretations of abnormal behaviour, four classes of handicapped behaviour were presented in cartoon strips of characters in school settings. The characters included an autistically withdrawn child, a neurotically anxious child, a mildly retarded child, and a crippled child with low self-esteem. Children responded to interview questions which explored concepts of causality, control and change. Children also provided favorability ratings for each character by selecting adjectives on a four point scale to describe the character. The PPVT was given to each child to ensure the homogeneity of the sample and to provide a rough measure of verbal intelligence to correlate with the other
measures.

Questionnaire special response scales and interview comprehension scores were analysed by 3-level 1-way ANOVAs; comprehension scores were also analysed by 1-way repeated measures ANOVA. Qualitative interview data were coded and then analysed by ANOVA of proportions. Favorability data were analysed by a 3-way ANOVA with two between factors, grade and sex, and one within factor, character.

The total questionnaire scores, comprehension scores and PPVT scores were significantly correlated for all grades, with the exception of the grade 2 PPVT and comprehension scores.

The six special response scales of the questionnaire revealed several patterns.

1. Grade 2 children tended to associate mental health concepts with medical terms significantly more than children in the higher grades did. In the interviews, grade 2 children sometimes suggested medical solutions for problems which they had defined as emotional. Many children at this age had apparently not yet made the distinction between physical and mental health problems.

2. Children in grade 2, more than children in the other grades, believed people could change their conditions or behaviours simply with effort. This philosophy of change was also expressed by grade 2 children in the interviews.

3. More than children in either of the other grades, grade 4 children associated mental retardation and mental illness with an inability to change.

4. With increasing age level,
   a. children were decreasingly likely to interpret behaviour as attention-seeking.
   b. they were increasingly likely to associate behaviour with familial factors, and
   c. they increasingly associated terms which include the word "mental"
such as "mental hospital" or "mental illness" with retardation.

The interview data provided three kinds of information. First, character comprehension scores suggested that grade 2 children were significantly less likely to understand any of the behaviours as well as the older children, and that the older two groups did not differ significantly in their ability to understand the behaviours. Children in the higher two grades understood the retarded behaviour less well than the other behaviours.

Second, the coded interview data showed grade differences in explanations of etiologies, of control, and of change. With increasing age, children tended to shift from believing behaviours were self-induced to perceiving them as reflections of environmental influences. Many children in grade 2 either believed the characters would outgrow their disorders or believed they could change their behaviours through effort. Children in grade 4 tended to cite the role of other-initiated help in bringing about change more than children in the other grades did. Effort, self-reflection and reinforcement from the environment were major channels of change suggested by grade 6 children. Grade 2 children were significantly more likely to believe change would be easy, whereas children in grades 4 and 6 thought change would be difficult. Increasingly with age, children were likely to ascribe fault to the two emotionally disturbed characters.

Finally, the two emotionally disturbed characters were perceived less favorably than the crippled or retarded characters.

Many of these findings reflect the decline of egocentrism in the child's thinking as she or he shifts from pre-operational to operational thought. The grade 2 child interprets the causes of behaviour primarily in terms of internal forces and similarly perceives changing behaviour as a process of self-effort.
As the child grows older, he or she begins to recognize other perspectives and notes the role of the environment, both in causing and in changing behaviour. Acquiring and changing behaviours are no longer perceived as isolated acts but rather as processes integrally related to the environment.

In addition to the influence of cognitive factors in the child's perceptions, societal attitudes have a major influence on her or his interpretations. As the child gets older, she or he is increasingly likely to ascribe fault to a character for emotionally disturbed behaviour, regardless of what the child believes has caused the disturbed behaviour. By grade 6, many children appear to have adopted prevalent adult attitudes toward emotionally disturbed behaviour.

Priorities for further research include the design of an improved measure for assessing children's knowledge of mental health phenomena and the validation of the present findings on other populations of children. The determination of cognitive and social factors contributing to children's attitudes might include the exploration of special populations of children, such as children from families with a disturbed member or children with various handicaps. Finally, this research has implications for the education of children about handicapped behaviour. Results indicate that at approximately age ten, children are beginning to recognize mental health terms and to understand psychologically complex behaviours. This may therefore be an appropriate age at which to introduce a program concerned with the development of these attitudes into a school curriculum.
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1. Worry means being
   a. bored.
   b. sad.
   c. excited.
   d. upset.

2. What is a criminal?
   a. Someone who cheats in games and breaks the rules.
   b. Someone who breaks the law.
   c. Someone who cries all the time.
   d. Someone who bothers the teacher.

3. When would you feel nervous?
   a. If you have a sore throat.
   b. If you got all your math problems right.
   c. If you are going to the doctor to get a shot.
   d. If your dinner was so good that you feel very full.

4. Insane means
   a. impossible.
   b. crazy.
   c. ugly.
   d. stupid.

5. What does mentally retarded mean?
   a. A person is not nice.
   b. A person is not happy.
   c. A person is not pretty or handsome.
   d. A person is not smart.

6. Depressed means
   a. unhappy.
   b. angry
   c. not honest.
   d. afraid.

7. When would you feel worried?
   a. If you didn't get what you wanted for Christmas.
   b. If you got a nice letter from a friend.
   c. If a kid bigger than you is going to hit you.
   d. If you saw a sad movie.

8. How do people become mentally ill?
   a. They catch it from somebody else who is mentally ill.
   b. They have a lot of problems which worry them all the time.
   c. They are in a car accident and hit their heads.
   d. They are born that way.
9. One thing about a **mentally retarded** person is that he
   a. does not try very hard.
   b. is not very strong.
   c. does not learn quickly.
   d. does not act friendly.

10. Nervous means
   a. happy.
   b. sick.
   c. smart.
   d. worried.

11. What do people in **mental hospitals** do?
   a. They do bad things.
   b. They do strange things.
   c. They all speak in words we can't understand.
   d. They all act retarded.

12. **Anxious** means
   a. bored.
   b. sad.
   c. worried.
   d. sick.

13. What does **mentally ill** mean?
   a. A person is bad and always in jail.
   b. A person does stupid things just so other people will look at him.
   c. A person is sick in bed with a bandage on his head.
   d. A person does strange things and can't understand his own feelings.

14. Why does someone commit suicide?
   a. They are very angry.
   b. They are very unhappy.
   c. They are very rich.
   d. They are very stupid.

15. What is a **delinquent**?
   a. A young person who plays cards a lot.
   b. A young person who has trouble speaking.
   c. A young person who has no parents.
   d. A young person who breaks the law.

16. How does a person become **mentally retarded**?
   a. She was born that way.
   b. Her parents were mean to her when she was a baby.
   c. She fell down and broke her leg and became retarded.
   d. She just wanted to be that way.

17. Who goes to a **mental hospital**?
   a. Bad people whom the police have sent there.
   b. People who have sicknesses that other people can catch.
   c. People who have problems thinking and feeling happy.
   d. Only mentally retarded and brain damaged people.
18. A person might become depressed when
   a. he is looking for something.
   b. he loses someone he loves.
   c. he has a headache.
   d. he is in a hurry.

19. What does senile mean?
   a. You can't see very well.
   b. You have some problems getting along with friends.
   c. You have some problems of being old.
   d. You never feel very happy.

20. If you knew someone who was mentally retarded and you wanted to help him, who would you send him to?
   a. To a doctor who would give him medicine to make him well.
   b. To a doctor who would do an operation on his brain.
   c. To a teacher who would work slowly with him.
   d. Nowhere; because no one can help him.

21. What does a psychologist do?
   a. Helps you when you have problems with your feelings.
   b. Helps you when you might need an operation.
   c. Helps you when you need more money.
   d. Helps you when you want to find out about the future.

22. What does stuttering mean?
   a. A person is clumsy and always dropping things.
   b. A person has a walking problem.
   c. A person is afraid of many things.
   d. A person has a speaking problem.

23. Madness means
   a. anger.
   b. craziness.
   c. dumbness.
   d. sadness.

24. How do people become senile?
   a. You are born that way.
   b. You do bad things.
   c. You catch it from a friend.
   d. You grow old.

25. If you had a friend who was depressed, what would you do?
   a. Give her an aspirin.
   b. Do something with her that she would like to do.
   c. Just tell her to stop being so silly and not pay attention to her.
   d. Tell her to go on a diet and to stop eating so much.

26. Suicide means
   a. going to court to sue someone.
   b. killing yourself.
   c. eating too much.
   d. killing somebody else.
27. When would you feel anxiety?
   a. If you lost your mother's watch.
   b. If you got a nice birthday present.
   c. If your team lost a game.
   d. If you are very tired.

28. What does therapy mean?
   a. Punishment for being bad.
   b. Help with putting on a play in a theatre.
   c. Help with problems.
   d. Reward for being good.

29. Can someone who is mentally ill be helped?
   a. Yes, by having his head X-rayed.
   b. Yes, by going to the drugstore and getting some medicine.
   c. Yes, by talking with a special kind of doctor.
   d. No, she will always be mentally ill.

30. A psychiatrist might help you when
   a. you feel unhappy all the time.
   b. you get lost.
   c. you have a cavity and need your teeth cleaned.
   d. you want to learn how to play a new game.

31. What does neurotic mean?
   a. A person like having a lot of people around.
   b. A person worries all the time.
   c. A person is very itchy.
   d. A person buys a lot of new things.

32. What is something a senile person might do?
   a. Hit you.
   b. Have bad stomach aches.
   c. Forget your name.
   d. Wear glasses to see better.

33. What is an alcoholic?
   a. Someone who buys alcohol.
   b. Someone who cannot stop drinking even when he tries.
   c. Someone who sells alcohol.
   d. Someone who does advertisements for alcohol on TV.

34. What does paranoid mean?
   a. A person is always making fun of other people.
   b. A person thinks he is better than anyone else, and beats up little kids.
   c. A person has a lot of problems with school work.
   d. A person thinks other people are going to hurt him.

35. What is a nervous breakdown?
   a. When a person is in a big hurry, but the car breaks down.
   b. When a person is so worried that he breaks his leg by accident.
   c. When a person is worried all the time that he can't think right.
   d. When a person is very excited about a party but then can't go because he gets a bad cold.
36. What is schizophrenia?
   a. A special diet for sick people.
   b. A kind of criminal.
   c. A person who helps you with your problems.
   d. A problem thinking clearly.

37. Manic means
   a. very excited.
   b. just like a man.
   c. bored.
   d. depressed.

38. What are hallucinations?
   a. When somebody sees things that are not really there.
   b. When somebody thinks people are saying mean things about them.
   c. When somebody is always sad and crying for no reason.
   d. When somebody has a lot of problems with school work.

39. What does psychosomatic mean?
   a. A health problem caused by emotions.
   b. Crazy in the head.
   c. Breaking a leg.
   d. Feeling sad about missing a TV show.

40. What is a hypochondriac?
   a. Someone who is afraid of things that most people aren't afraid of.
   b. Someone who needs a special kind of operation on his brain.
   c. Someone who always thinks he is sick even though he isn't.
   d. Someone who thinks he is better than anybody else.

41. If you have a friend who has a phobia, what is the matter with her?
   a. She has problems with her school work so she needs a special teacher.
   b. She is afraid of something which most people aren't afraid of.
   c. She has a special disease so she has to use a wheelchair.
   d. She cannot speak very well.

42. What is a psychopath?
   a. Someone who cries all the time and is a bad sport if he loses the game.
   b. Someone who is always making fun of other people.
   c. Someone who acts crazy and silly all the time to get attention.
   d. Someone who doesn't care if he breaks the law and makes people unhappy.

43. What are tranquillizers?
   a. Things you take if you are crazy.
   b. Things you take to make you relax.
   c. Things you take to make you see better.
   d. Things you take to make you smarter.

44. What is an inferiority complex?
   a. When you think everyone hates you.
   b. When you think you are better than everyone else.
   c. When you think everyone is better than you.
   d. When you feel confused all the time.
1. **Worry** means being
   a. disappointed
   b. angry
   c. upset
   d. excited

2. What is a **criminal**?
   a. Someone who cries all the time.
   b. Someone who breaks the law.
   c. Someone who cheats in games and breaks the rules.
   d. Someone who disobeys the teacher.

3. When would you feel nervous?
   a. If your mother threw away your favorite game.
   b. If your best friend is absent.
   c. If a kid bigger than you is going to hit you.
   d. If you get all of your math problems right.

4. What does **mentally retarded** mean?
   a. A person is not honest.
   b. A person is not clean.
   c. A person is not good at sports.
   d. A person is not smart.

5. When would you feel **worried**?
   a. If you didn't get what you wanted for Christmas.
   b. If you are going to the doctor to get a shot.
   c. If a friend broke a toy of yours.
   d. If you saw a very sad movie.

6. **Nervous** means
   a. silly.
   b. unhappy.
   c. disappointed.
   d. worried.

7. If there was a child in your class who never talked or played with the other children and just liked to sit in a corner by himself all the time, why would you think he was like that?
   a. He was born like that and has always liked to be alone.
   b. His parents taught him that being alone was best.
   c. Other children were never nice to him, so he got that way.
   d. He was in an accident and his brain got messed up.

8. **Depressed** means
   a. unhappy.
   b. angry.
   c. not honest.
   d. afraid.
9. Why does a person who breaks the law act like that?
   a. Because he was born that way and has always been bad.
   b. Because he had an accident that messed up his brain and made him do bad things.
   c. Because he was never taught that breaking laws is bad.
   d. Because he didn't have a good family life.

10. How does a person become mentally retarded?
   a. She was born that way.
   b. Her parents were mean to her when she was a baby.
   c. She fell down and broke her leg and became retarded.
   d. She never tried hard enough to be like other children.

11. What does mentally ill mean?
   a. A person was retarded and had brain damage when he was born.
   b. A person does silly things just so other people will look at him.
   c. A person is sick in bed with a bandage on his head, usually from a bad shock.
   d. A person does strange things and can't understanding his own feelings.

12. What is something that is true about most mentally retarded people?
   a. They are not smart because they do not try hard enough.
   b. They usually sit alone and talk out loud to themselves.
   c. They can not learn very quickly.
   d. They are not very friendly.

13. A girl feels that everybody hates her and wants to hurt her, even though this is not true. Why does she feel that way?
   a. She was born that way, with her feelings all mixed up.
   b. She had an accident and has felt that way ever since.
   c. She just likes to feel sorry for herself to get attention.
   d. Her parents did not show her they loved her.

14. A person might become depressed when
   a. someone tells him a lie.
   b. he sees something he is afraid of.
   c. he loses someone he loves.
   d. he has a terrible stomach ache.

15. What does insane mean?
   a. impossible
   b. crazy
   c. stupid
   d. silly

16. What do you think a person who is very very nervous all the time should do to become more calm?
   a. Go away on a vacation.
   b. Get some medicine from a doctor.
   c. Talk to a certain kind of doctor about her feelings.
   d. Just try very very hard not to be nervous and she'll be fine.

17. Who goes to a mental hospital?
   a. People who need operations on their brains.
   b. People who have sicknesses that other people can catch.
   c. Only mentally retarded people and people with brain damage.
   d. People who are not able to think well or feel happy.
18. **Anxious** means  
   a. curious.  
   b. bored.  
   c. angry.  
   d. worried.

19. How do most people become **mentally ill**?
   a. They catch it from somebody else who is mentally ill.  
   b. They have a lot of problems which worry them all the time.  
   c. They are in a car accident and hit their heads so they get that way.  
   d. They are born that way.

20. Everybody uses chairs and it seems silly to be afraid of a chair. But one girl is afraid of wooden chairs and cries if she has to sit on a chair. Why does she act like that?
   a. She was born like that, afraid of everything.  
   b. Her parents taught her to be that way.  
   c. A chair broke while she was sitting on it once.  
   d. She is just acting silly so the teacher will let her sit on the floor.

21. What does **senile** mean?
   a. You never feel very happy.  
   b. You can't see very well.  
   c. You have a hard time remembering things.  
   d. You have problems getting along with friends.

22. If you knew someone who was **mentally retarded** and you wanted to help him, who would you send him to?
   a. To a doctor who would give him medicine to make him well.  
   b. To a teacher who would work slowly with him.  
   c. To a doctor who would do an operation on his brain.  
   d. Nowhere, because no one can help him.

23. A man picks up every little piece of litter he sees and saves it all. When his wife tries to throw it away, he gets very upset. Why is he like this?
   a. He was born that way with that kind of problem.  
   b. He is just being stupid and trying to get attention.  
   c. His parents made him be very clean when he was young.  
   d. He had a sickness when he was a baby that made him do silly things.

24. Most **mentally ill** people are
   a. retarded.  
   c. spastic.  
   c. unhappy.  
   d. very old.

25. What is a **delinquent**?
   a. A young person who has a lot of problems with his school work.  
   b. A young person who has trouble speaking.  
   c. A young person who has no parents.  
   d. A young person who breaks the law.

26. What do people in **mental hospitals** do?
   a. They do strange things that don't make sense to us.  
   b. They all feel sick in the head and they lie in their beds.  
   c. They all speak in words that we can't understand.  
   d. They act like we do, except they are all retarded.
27. What is a psychologist?
   a. Someone who helps you when you might need a brain operation.
   b. Someone who helps you when you are confused about your feelings.
   c. Someone who helps you when you are very poor and need more money.
   d. Someone who helps you when you want to find out about the future.

28. What does mental mean?
   a. When someone is retarded.
   b. Being really bad at sports.
   c. Things going on in someone's head.
   d. When someone just is not very nice.

29. If you got on a bus and you saw someone sitting all alone talking quietly out loud to herself as if someone were sitting beside her, what would you think?
   a. She was born like that and has always been strange.
   b. She has problems with her feelings that made her start acting like that.
   c. She is just acting silly like that because she wants to get lots of attention.
   d. She is drunk.

30. When would you feel anxiety?
   a. If you lost your mother's new watch.
   b. If you got an exciting birthday present.
   c. If you wanted very much to win a game but your team lost.
   d. If it is raining and you wanted to play outside.

31. Do you think someone who is mentally ill can be helped?
   a. Yes, he can be helped by having a doctor X-ray his head.
   b. Yes, he can be helped if he goes to the drugstore and gets some medicine.
   c. Yes, he can be helped if he talks with a special kind of doctor.
   d. No, he cannot be helped because he will always be mentally ill.

32. What does stuttering mean?
   a. A person is clumsy and always dropping things.
   b. A person has a walking problem.
   c. A person has a speaking problem.
   d. A person is afraid of many things.

33. A lady has stomach aches and headaches all the time and thinks she is always sick, even though her doctor tells her she is very healthy. Why?
   a. She is pretending.
   b. She worries too much.
   c. She is being stupid.
   d. The doctor is wrong.

34. Madness means
   a. silliness.
   b. anger.
   c. dumbness.
   d. craziness.

35. How do people become senile?
   a. They are born that way.
   b. They catch it from a friend.
   c. They do bad things.
   d. They grow old.
36. A psychiatrist might help you when
   a. you feel unhappy all the time.
   b. you get lost.
   c. you need extra help with your school work.
   d. you had a car accident and hit your head.

37. What does spastic mean?
   a. A person is crazy in the head.
   b. A person is not smart and does dumb things all the time.
   c. A person has a kind of sickness that makes it hard to walk.
   d. A person has very mean parents, so she is very shy with other people.

38. If a person is mentally ill, is it his fault?
   a. Yes it is his fault, and he should try harder not to be that way.
   b. Yes, it is his fault, but now that he's mentally ill, he'll always be that way.
   c. No, it is not his fault, but with people's help, he could get better.
   d. No, it is not his fault, it just happened to him, and he'll always be that way.

39. A big kid always hits little kids and scares them and likes to ruin things that belong to other people. Why does he act like that?
   a. He was born that way.
   b. His parents were very mean to each other and that upset him.
   c. No one ever told him he shouldn't do that.
   d. He saw someone being a bully one day and he thought it might be fun so he just decided to start doing it.

40. If you heard a child say, "I c-c-c-can't d-d-do it", why would she speak like that?
   a. She was born that way.
   b. Her parents didn't teach her to speak right.
   c. She gets worried when she has to speak.
   d. She is not very smart.

41. What does neurotic mean?
   a. A person gets sick very easily.
   b. A person worries about things that are not important.
   c. A person is very nervy and always boasting and showing off.
   d. A person spends a lot of money buying new things because he is rich.

42. If a man knows that drinking a lot of alcohol every single day is bad for him, why does he do it?
   a. He doesn't try hard enough to stop.
   b. He just can't help himself.
   c. He was born that way.
   d. He is just very thirsty.

43. What does therapy mean?
   a. Help with putting on a play in a theatre.
   b. Punishment when you have been bad.
   c. Help with understanding your feelings.
   d. Extra help with your school work when you get behind.

44. What are hallucinations?
   a. When somebody sees things that are not really there.
   b. When somebody thinks people are saying mean things about them.
   c. When somebody is always sad and crying for no reason.
   d. When somebody has a lot of problems with school work.
45. You go to a friend's house and his grandmother is there. You have met her many times, but sometimes she calls you by a name that is not yours. Why does she do that?
   a. Old people sometimes try to be funny like that.
   b. Old people sometimes can't remember things.
   c. Old people are sometimes not very smart.
   d. Old people are sometimes not very polite.

46. A boy tries to hurt himself by banging his head against a wall or by hitting himself very hard. Why does he act like this?
   a. He is very angry at himself.
   b. He is acting stupid to get attention from the teacher.
   c. His parents used to hit his head when he was a baby.
   d. He has something wrong in his brain.

47. What is an alcoholic?
   a. Any person who sells alcohol.
   b. Any person who drinks alcohol.
   c. A person who cannot stop drinking alcohol even when he tries.
   d. A person who never drinks any alcohol because he knows it is bad for him.

48. What is a nervous breakdown?
   a. When a person is very excited and in a big hurry, but the car breaks down.
   b. When a person is so worried all the time that she can't think right.
   c. When a person is very unhappy because she has a broken leg.
   d. When a person is very excited and nervous because it is her birthday.

49. What does paranoid mean?
   a. A person is always making fun of other people.
   b. A person thinks he is better than anyone else and beats up little kids.
   c. A person has a lot of problems with school work.
   d. A person thinks other people want to hurt him.

50. If there was a child in your class who had a hard time walking and it was hard to understand her when she talked, but she did very good school work, what would you think.
   a. She was born with some walking and talking problems.
   b. She had an accident when she was a baby and became retarded.
   c. Her parents didn't teach her to walk and talk right.
   d. Her parents and friends didn't love her, so she got this sickness.

51. What is a pervert?
   a. Someone who doesn't do things the way most people do.
   b. Someone who is always picking on smaller children.
   c. Someone who is not as smart as the other children in the class.
   d. Someone who is very nervous and not good at sports.

52. A person really thinks the walls of her room are moving back and forth even though of course the walls are still. Why does she think that?
   a. She was born that way.
   b. She has a seeing problem and needs glasses.
   c. She has something wrong in her brain.
   d. She is mentally retarded.
53. What is a psychopath?
   a. Someone who cries all the time and is a bad sport if he loses a game.
   b. Someone who doesn't care if he breaks laws or makes people unhappy.
   c. Someone who acts crazy and silly all the time just to get attention.
   d. Someone who is always making fun of other people.

54. If a person is mentally retarded, is it her own fault that she is that way?
   a. No, it isn't her fault, but if she worked really hard, she could become a smart person.
   b. No it isn't her fault, and she will always be that way.
   c. Yes, it is her fault, but she could work really hard and become a smart person.
   d. Yes, it is her fault, and she will always be that way.

55. A lady feels she must wash her hands four times every hour, even though they are very clean. She thinks if she doesn't do this, something bad will happen to her. Why is she like that?
   a. She was probably born that way.
   b. She read in a book that she should do it, and now she's just being silly to believe the book.
   c. When she was a child, her parents got mad if her hands were dirty.
   d. She had an accident and hurt her hands so she thinks they will get better if she washes them a lot.

56. How does someone become spastic?
   a. He was born that way.
   b. He didn't have nice parents.
   c. He didn't try hard enough to be like other children.
   d. His friends made fun of him so he got that way.

57. What is one way a person might get brain damage?
   a. From a bad shock, like when someone he loves dies.
   b. From being crippled and having everyone tease him.
   c. From never working hard enough in school so he got put back a few grades.
   d. From a bad car accident.
APPENDIX D

Mental Health Concepts Questionnaire

Directions

These questions are for children of many different ages, so some questions may seem very easy and some may seem very hard. Read each question carefully and choose the answer which you think is best. This is the way to answer a question.

What is an animal that can climb a tree?

a. turtle
b. fish
c. horse
d. cat

Cat is the right answer, so you circle the letter just in front of the word cat, like this:

Sometimes more than one answer is correct, but ONLY CIRCLE ONE LETTER. Pick the answer that you think is the most correct.

Now try these examples.

What does huge mean?

a. small
b. happy
c. big
d. thin

If you wanted to buy an apple, you would go

a. to a school.
b. to a hospital.
c. to a store.
d. to a movie.

An elephant is

a. a very big animal that lives in trees.
b. a small animal that swims in the ocean.
c. an animal that eats houses.
d. a large animal that has a trunk.
1. What is a **criminal**?
   a. Someone who cries all the time.
   b. Someone who breaks the law.
   c. Someone who cheats in games and breaks the rules.
   d. Someone who disobeys the teacher.

2. When would you feel **worried**?
   a. If you didn't get what you wanted for Christmas.
   b. If you are going to the doctor to get a shot.
   c. If a friend broke a toy of yours.
   d. If you saw a very sad movie.

3. Nervous means
   a. silly.
   b. unhappy.
   c. disappointed.
   d. worried.

4. Depressed means
   a. unhappy.
   b. angry.
   c. not honest.
   d. afraid.

5. What is something that is true about most **mentally retarded** people?
   a. They are not very friendly.
   b. They can not learn very quickly.
   c. They usually sit alone and talk aloud to themselves.
   d. They are not smart because they do not try hard enough.

6. A girl feels that everybody hates her and wants to hurt her, even though this is not true. Why does she feel that way?
   a. She was born that way, with her feelings all mixed up.
   b. She had an accident and has felt that way ever since.
   c. She just likes to feel sorry for herself to get attention.
   d. Her parents did not show her they loved her.

7. What does **mentally ill** mean?
   a. A person was retarded when he was born.
   b. A person does silly things just so other people will look at him.
   c. A person does strange things and can't understand his own feelings.
   d. A person is sick in bed and has a bandage on his head, usually from a bad shock.
8. A person might become depressed when
   a. someone tells him a lie.
   b. he sees something he is afraid of.
   c. he loses someone he loves.
   d. he has a terrible stomach ache.

9. Why does a person who breaks the law act like that?
   a. Because he was born that way and has always been a bad person.
   b. Because he didn't have a good family life.
   c. Because he was never taught that breaking laws is bad.
   d. Because he had an accident that messed up his brain and made him do bad things.

10. What does insane mean?
    a. impossible
    b. stupid
    c. silly
    d. crazy

11. What do you think a person who is very very nervous all the time should do to become more calm?
    a. Go away on a vacation.
    b. Get some medicine from a doctor.
    c. Talk to a certain kind of doctor about her feelings.
    d. Just try very very hard not to be nervous and she'll be fine.

12. Who goes to a mental hospital?
    a. People who need operations on their brains.
    b. People who are not able to think well or feel happy.
    c. People who have sicknesses that other people can catch.
    d. Only mentally retarded people and people with brain damage.

13. What does senile mean?
    a. You never feel very happy.
    b. You can't see very well.
    c. You have a hard time remembering things.
    d. You have problems getting along with friends.

14. How do most people become mentally ill?
    a. They catch it from somebody else who is mentally ill.
    b. They have a lot of problems which worry them all the time.
    c. They are in a car accident and hit their heads so they get that way.
    d. They are born that way.
15. If you knew someone who was **mentally retarded** and you wanted to help him, who would you send him to?

a. To a doctor who would give him medicine to make him well.
b. To a teacher who would work slowly with him.
c. To a doctor who would do an operation on his brain to make him well.
d. Nowhere, because no one can help someone who is mentally retarded.

16. Most **mentally ill** people are

a. retarded  
b. spastic  
c. unhappy  
d. very old  

17. A man picks up every little piece of litter he sees and saves it all. When his wife tries to throw it away, he gets very upset. Why is he like this?

a. He was born that way with that kind of problem.
b. He is just being stupid and trying to get attention.
c. His parents made him be very clean when he was young.
d. He had a sickness when he was a baby that made him do silly things.

18. What is a **psychologist**?

a. Someone who helps you when you might need a brain operation.
b. Someone who helps you when you are confused about your feelings.
c. Someone who helps you when you are very poor and need more money.
d. Someone who helps you when you want to find out about the future.

19. What do people in **mental hospitals** do?

a. They do strange things that don't make sense to us.
b. They all feel sick in the head and they lie in their beds.
c. They all speak in words that we can't understand.
d. They act like we do, except that they are all retarded.

20. When would you feel **anxiety**?

a. If you lost your mother's brand new watch.
b. If you got an exciting birthday present.
c. If you wanted very much to win a game but your team lost.
d. If it is raining and you wanted to play outside.

21. If you got on a bus and you saw someone sitting all alone, talking very quietly out loud to herself as if someone were sitting beside her, what would you think?

a. She was born like that and has always been strange.
b. She has problems with her feelings that made her start acting like that.
c. She is just acting silly like that because she wants to get lots of attention.
d. She is drunk.
22. Do you think someone who is **mentally ill** can be helped?
   a. Yes, he can be helped by having a doctor X-ray his head.
   b. Yes, he can be helped if he goes to the drugstore and gets some medicine.
   c. Yes, he can be helped if he talks with a doctor about his feelings.
   d. No, he can not be helped because he will always be mentally ill.

23. **Madness** means
   a. silliness.
   b. anger.
   c. dumbness.
   d. craziness.

24. A **psychiatrist** might help you when
   a. you get lost.
   b. you feel unhappy all the time.
   c. you are in a car accident and hit your head.
   d. you need extra help with your school work.

25. What does **spastic** mean?
   a. A person is crazy in the head.
   b. A person is not smart and does dumb things all the time.
   c. A person has a kind of sickness that makes it hard to walk.
   d. A person has very mean parents, so she is very shy with other people.

26. If a person is **mentally ill**, is it his fault?
   a. Yes it is his fault, and he should try very hard not to be that way.
   b. Yes it is his fault, and he'll always be that way.
   c. No it is not his fault, but if people help him, he'll stop being that way.
   d. No it is not his fault, but he'll always be that way.

27. A big kid always hits little kids and scares them and likes to ruin things that belong to other people. Why does he act like that?
   a. He was born that way.
   b. His parents were very mean to each other and that upset him.
   c. No one ever told him he shouldn't do that.
   d. He saw someone being a bully one day and he thought it might be fun, so he just decided to start doing it.

28. What does **neurotic** mean?
   a. A person gets sick very easily.
   b. A person thinks too much about things that are not important.
   c. A person is very nervy and always boasting and showing off.
   d. A person always spends a lot of money buying new things because he is rich.
29. What does **therapy** mean?
   a. Help with putting on a play in a theatre.
   b. Punishment when you have been bad.
   c. Help with understanding your feelings.
   d. Extra help with your school work when you get behind.

30. You go to a friend's house and his grandmother is there. You have met her many times, but sometimes she calls you by a name that is not yours. Why does she do that?
   a. Old people sometimes try to be funny like that.
   b. Old people sometimes can not remember things.
   c. Old people are sometimes not very smart.
   d. Old people are sometimes not very polite.

31. A boy tries to hurt himself by banging his head against a wall or by hitting himself very hard. Why does he act like this?
   a. He is very angry at himself.
   b. He is acting stupid to get attention from the teacher.
   c. His parents used to hit his head when he was a baby, so he learned it.
   d. He has something wrong in his brain.

32. What is an **alcoholic**?
   a. Any person who sells alcohol.
   b. Any person who drinks alcohol.
   c. A person who cannot stop drinking alcohol even when he tries.
   d. A person who never drinks any alcohol because he knows it is bad for him.

33. A person really thinks she sees the walls of her room moving back and forth even though of course the walls are still. Why?
   a. She was born that way.
   b. She has a seeing problem and needs glasses.
   c. She has something wrong in her brain.
   d. She is mentally retarded.

34. What is a **psychopath**?
   a. Someone who cries all the time and is a bad sport if he loses a game.
   b. Someone who doesn't care if he breaks laws or makes people unhappy.
   c. Someone who acts crazy and silly all the time just to get attention.
   d. Someone who is always making fun of other people.

35. If a person is **mentally retarded**, is it her own fault that she is that way?
   a. No, it isn't her fault, but if she worked really hard, she could become a smart person.
   b. No it isn't her fault, and she will always be that way.
   c. Yes, it is her fault, but she could work really hard and become a smart person.
   d. Yes, it is her fault, and she will always be that way.
36. What is a nervous breakdown?
   a. When a person is very excited and in a big hurry, but the car breaks down.
   b. When a person is so worried all the time that she can't think right.
   c. When a person is very unhappy because she has a broken leg.
   d. When a person is very excited and nervous because it's her birthday.

37. A lady feels she must wash her hands four times every hour, even though they are very clean. She thinks if she doesn't do this, something bad will happen to her. Why is she like that?
   a. She was probably born that way.
   b. She read in a book that she should do it, and now she's just being silly and trying to get attention.
   c. When she was a child, her parents got mad if her hands were dirty.
   d. She had an accident and hurt her hands so she thinks they will get better if she washes them a lot.
APPENDIX E

Character Cartoon Strips

(a) Chris
(b) Corry
(c) Les
(d) Sandy
CHRIS IN THE CLASSROOM

This is hard for me, but I am trying.

Yes, you are doing fine.

Gee, my work is harder than Chris's work. I wonder why Chris has such easy work.

Hey Chris, what did you put for a word that rhymes with 'cat'?

Chris seems different from other kids, and never understands things very well.

CHRIS IN THE SCHOOLYARD

Let's ask Chris to play in our game.

OK, do you all understand the rules of the game?

Chris still doesn't understand how to play.

Boy, that was a lot of fun.

Chris is nice, but never learns very well.
Corry in the Schoolyard

Would you like to play frisbee with us?

I'd like to try.

I think I can get it... oh, oh dear, I'm going to fall!

I guess I shouldn't try to play games like that.

Corry in the Classroom

I wish I could move faster so I wouldn't always be the last one in the room.

This art project is fun, but it's hard for me to hold the paper still.

Would you pass me the glue please?

I'm sorry... I'm always dropping things.
SANDY IN THE CLASSROOM

Why does Sandy just sit and stare at that pencil instead of helping us build this?

I don't know.

Please raise your hands if you want to go out to the playground.

You never pay attention or talk and work with other children. Why?

SANDY IN THE SCHOOLYARD

Sandy is just sitting alone talking out loud.

Maybe Sandy would like to play with us.

Step on a crack... break your mother's back, hehe.

Hi Sandy. Why don't you come join us?

Where are you going? Why don't you answer me?

Once upon a time and once upon a time and once upon a time. Ha ha ha! Once upon a time...
### Appendix F

**Adjective Favorability Sheet**

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APPENDIX G

Interview Schedule

After both cartoon strips for one character had been read, the following questions were asked in the order presented.

1. What kind of a person is X?
2. How do you think X feels?
3. What do you think made X start acting this way?
   (Probe) How did X become this kind of person?
4. Is it X's fault that she/he acts like this?
5. Do you think X wants to act this way?
5a. (If answer is "yes" to question 5) Why would he/she want to act like this?
5b. (If answer is "no" to question 5) If he/she doesn't want to act that way, why does he/she? (Probe) Well, you said X doesn't want to act this way. If she/he doesn't want to act like this, then why does she/he keep doing it?
6. Do you think X could change?
7. (If answer is "yes" to question 6) How would it happen that X would change?
8. Would it be hard or easy for X to change?

While the interview questions were asked exactly as expressed above, the examiner was flexible in her interviewing style and probed children if their answers were unclear or unusually creative.
APPENDIX H

Scoring Schedule for Comprehension Scores

A total of nine points were possible for Les, Chris and Sandy; ten points were possible for Corry.

Les

**Statement of Les's problem** (1 point)

1 point: The child's answer included recognition that Les thinks she/he is not good at things even though she/he is.
Examples: "He thinks he isn't good."
"He's afraid he can't ever do stuff good."

0 points: The child indicated he/she thinks Les is actually not able to do things well.
Example: "He's no good. He can't do anything right."

**Identification of Les's feelings** (2 points)

2 points: The child's answer identified Les's negative self image, lack of self confidence or irrational worry.
Examples: "He doesn't like himself."
"He thinks he's a bad person."

1 point: The child's answer included only the idea of generally negative feelings.
Examples: "He feels terrible."
"Sad."

**Description of etiology** (2 points)

2 points: The child described a repeated, ongoing or traumatic experience which could be either self-induced or other-induced.
Examples: "His parents never tell him he's good."
"Maybe she wrote a poem that she really loved and she handed it in and the teacher gave it back to her and said she should change part of it and she just felt so embarrassed and bad that she thought she could never do anything again."

1 point: The child described one experience, either self-induced or other-induced, but less plausible than a 2-point response. (This would not include a traumatic experience.)
Example: "A real mean guy in the class told him he was no good and he believed him so he got like this."

0 points: The child believed Les was born that way.
Desire to act this way (1 point)

1 point: The child's answer was acceptable, logical and consistent.
Example: "He wants to get attention from his parents because he has too many little sisters and brothers."
"He doesn't want to be like that, but he can't help it because they are always telling him he's no good."

0 points: The child's answer was illogical or imperceptive.
Examples: "He just likes being that kind of person. He thinks it's fun."
"She doesn't like being that way, but she has to do it." (E: Why does she have to do it?) "Because they're always saying she's dumb and she's not trying hard to not listen."

Mechanics of change (2 points)

2 points: The child's answer suggested other-initiated help.
Example: "People will tell him over and over and over again that he is good and ask him to play and all that. And maybe they could let him win a few times and he'll feel better."

1 point: The child's answer included the idea of self-initiated help but involving others as reinforcers.
Example: "He'll think hard about what the people are saying...that he is good and great...and then he'll try to believe them and if they keep saying it, sooner or later he'll believe it."

0 points: The child presented a "try harder" or "grow out of it" solution.
Examples: "He'll try hard to think he's good."
"One day when he wakes up, he'll see that he's good and then he won't be like that."

Difficulty of change (1 point)

1 point: The child believed that changing behaviour and feelings is difficult.

0 points: The child suggested that changing would be easy.

Sandy

Statement of Sandy's problem and identification of Sandy's feelings (3 points)

3 points: The answer included all of the following: (a) Sandy likes to be alone or doesn't like to do things with others, (b) Sandy is probably sad or lonely, and (c) Sandy appears happy but probably isn't or in some way conveys the strangeness of the behaviour.
Example: "She's not normal. She doesn't do things with them and she pretends to be happy, but she wouldn't act like that if she was."
2 points: The child's answer included the first two (a and b) or the third (c).
   Example: "She's sad. She never does stuff with the other kids when they ask her."

1 point: The child's answer included either (a) or (b).
   Example: "She's lonely."

Description of etiology (2 points)

2 points: The child explained an organic cause for the behaviour (i.e., said that Sandy was "born that way" and elaborated upon that to suggest retardation or brain damage) or the child suggested the behaviour was other-induced.
   Examples: "I think she was born weird. Something from when she was in her mom's stomach and her mom always got drunk. That gave her brain damage."
   "Maybe she's new in the school and in the old school people were always making fun of her because she was shy and she's afraid they'll do it here too so she's just staying on her own."

1 point: The child answered "born that way" and elaborated somewhat, suggesting something was wrong with Sandy when he/she was born.

0 points: The child could not think of an etiology but selected "born that way" when given the choice of "born that way" or "experience"; the child was not able to elaborate upon the choice despite the probe. The child suggested Sandy's behaviour was entirely self-induced.
   Example: "She saw someone else doing it once and decided to try being that way and now she can't stop."

Desire to act this way (1 point)

1 point: The child's answer included the suggestion that Sandy could not help it, was not aware that his/her behaviour was strange, or was reacting to the environment.

0 points: The child's answer implied that Sandy was just behaving this way for attention or because she/he enjoyed it.

Mechanics of change (2 points)

2 points: The child described change involving other-initiated help.
   Example: "If people just keep trying to be nice even though she isn't nice, maybe some day she'll let them be nice to her back and she'll like it and see it's good to have friends."
   "Her parents should take her to a doctor."

1 point: The child's answer included self-initiated help involving others as reinforcers or suggesting Sandy will always be that way because he/she was born that way.
   Examples: "He might get too lonely one day and go over to them when
they're working and say, 'Hi, I'll work too' and they'll let him work too and then he'd change because he'd like it."
"I don't think he'll change because something is wrong inside his brain. There's nothing to do about it.

0 points: The answer emphasized Sandy's change by "growing out of it" or by trying hard.
Examples: "He will just try to be nicer."
"When she grows up she'll have to get a job and then she'll just have to talk to people too or she'll get fired."

**Difficulty of change (1 point)**

1 point: The child thought it would be difficult for Sandy to change.

0 points: The child thought it would be easy for Sandy to change.

**Chris**

**Statement of Chris's problem (2 points)**

2 points: The child's answer indicated that Chris has difficulty learning things.
Examples: "He has a disability in learning."
"He can't learn so fast."

1 point: The child suggested that Chris doesn't understand things well.
Example: "He don't understand stuff good."

**Identification of Chris's feelings (1 point)**

1 point: The child identified Chris's mood as happy or happy and sad.
Example: "He's a pretty happy guy, but sometimes he's sad because he doesn't know the answer there."

0 points: The child perceived Chris as an unhappy person.
Example: "He's sad because he doesn't know nothing."

**Description of etiology (2 points)**

2 points: The child indicated that Chris was "born that way" before she/he was offered the choice of "born that way or experience".

1 point: The child chose "born that way" after having suggested an experiential etiology.

0 points: The child suggested Chris's behaviour was a function of experiences, such as not studying hard enough or starting school late.
Desire to act this way (1 point)

1 point: The child provided an acceptable, logically consistent answer.
Examples: "I doubt he knows he's acting that way."
"Yes, he's happy the way he is."
"He can't help it. He was born that way."

0 points: The child's answer was illogical or incorrect.
Example: "He doesn't want to be that way, but he doesn't try hard enough."

Mechanics of change (2 points)

2 points: The child's response included the idea of other-initiated help, a special school, or a tutor.

1 point: The answer focused primarily upon self-initiated help but also the involvement of others as reinforcers, or the answer suggested Chris will always be that way because he was born that way.
Examples: "He'll tell his mom and dad that he doesn't like to not understand so many things and they'll help him extra and take him on a trip."
"No there's, just nothing that can help you if you were borned like that."

0 points: The child suggested a "try harder" or a "grow out of it" solution.
Example: "He'll try hard and hard and someday he'll be smart."

Difficulty of change (1 point)

1 point: The child suggested that changing would be difficult.

0 points: The child believed that changing would be easy.

Corry

Statement of Corry's problem (2 points)

2 points: The child recognized that braces and the crutches in the cartoon represented a permanent or serious condition.
Examples: "He has paralyzed legs."
"He has something very wrong with his legs. Something happened to them in an accident I think."

1 point: The child perceived Corry's legs as broken and implied that the condition was temporary. (The implication that the condition was not permanent or serious may have come later in the interview.)
Example: "He has a broken leg."

0 points: The child did not comment on Corry's physical condition at any point in the interview.
Identification of Corry's feelings (2 points)

2 points: The child mentioned that Corry lacked self-confidence.
Example: "He doesn't think he's good. He thinks he shouldn't try to do stuff."

1 point: The child identified Corry's unhappiness.
Example: "She's sad."

Description of etiology (2 points)

2 points: The child's answer included both an illness/accident/birth condition comment as well as identification of the self-reflective or interpersonal factors which contributed to Corry's behaviour.
Example: "He's sad because he was born that way and when he was a baby, he saw other babies didn't have crutches and he couldn't move so fast so he's sad."

1 point: The child's answer suggested Corry was born that way or had an accident but included no further elaboration, even with a probe.

Desire to act this way (1 point)

1 point: The child indicated that Corry did not want to act that way, but that he/she had no control over his/her condition.

0 points: The child's answer suggested Corry liked to be that way.

Mechanics of change (2 points)

2 points: The child's answer included the idea of other-initiated help.
Example: "If other people just encourage him and tell him his crippledness doesn't really matter, he'll get happier."

1 point: The child suggested primarily self-initiated help but with the involvement of others as reinforcers, or the child said Corry would always be that way because of his/her condition.
Examples: "She could try really really hard to learn some games that just crippled people could play and then maybe some of the other kids might be interested to learn them too."
"He'll probably always be that way because he'll always be crippled and people will always laugh at him."

0 points: The child believed Corry could "grow out" of her/his condition or she/he could overcome it entirely by trying hard.
Examples: "He needs to try and try and try and get his own little thing he can do well. That's all he needs and whammo, he'll be like a new person."
"When she's a grown up, she'll be much happier. Kids won't be teasing her then."
Difficulty of change (1 point)

1 point: The child believed Corry could only change with difficulty.

0 points: The child suggested it would be easy for Corry to change.
APPENDIX I

Coding Categories for Interview Data

The interview questions (IQ) are directly from the interview schedule. The coding questions (CQ) were questions the coders were asking of the responses to the interview questions. Coding categories (CC) were designed as described in the method section.

1. IQ: "What kind of a person is X?"
   "How do you think X feels?"
   CQ: Does the child generally perceive the character's problem?
   CC: (1) Yes
       (2) No

2. IQ: "What do you think made X start acting this way?"
   (Probe) "How did X become this kind of person?"
   CQ: What kind of etiology does the child describe?
   CC: (1) Born that way
       (2) Nonsocial: Accidents or diseases are the causes of the condition.
           Examples: "A dog bit her and gave her brain damage."
           "He got a cold and it got badder and badder until he started doing that."
       (3) Social-internal or self-induced: Primary emphasis is on the character's thoughts or behaviour as the major cause of her/his present condition.
           Examples: "He saw other kids being perfect and he wanted to be perfect too."
           "When he was a little baby, he did something wrong once so he thought he wasn't ever going to be good ever again."
       (4) Social-external or other-induced: Emphasis is on other individuals as the cause.
           Examples: "They were always bugging her."
           "Her parents never let her do stuff so she started liking being alone all the time."

3. IQ: "Is it X's fault that she/he acts like this?"
   CC: (1) Yes, X is at fault.
       (2) No, X is not at fault.

4. IQ: "Do you think X wants to act this way?"
   CC: (1) Yes, X wants to behave this way.
       (2) No, X does not want to behave this way.
       (3) X is not aware that the behaviour is abnormal.
4a. If answer is "yes" to question 4
   IQ: "Why would he/she want to act like this?"
   CC: (1) The behaviour is to get attention or it is a response to adverse environmental conditions.
       Examples: "She wants people to feel sorry for her."
       "They were mean to her so now she wants to get back at them."
    (2) The character likes being that kind of person.
       Example: "She thinks it's fun."

4b. If answer is "no" to question 4
   IQ: "If he/she doesn't want to act that way, why does he/she?"
   CC: (1) The character cannot help it; it is not his/her fault; the environmental situation makes him/her do it.
    (2) The character is not trying hard enough; she/he does not put enough effort into behaving differently.

5. IQ: "Do you think X could change?"
   CC: (1) Yes
    (2) No

6. If answer is "yes" to question 5
   IQ: "How would it happen that X would change?"
   CC: (1) Try harder: Effort is the only factor necessary in changing.
       Examples: "She would try hard to be happy."
       "He should just try and try and try until he did things better."
       "He would learn more." (E: "How would he learn more?") "He could work a lot."
    (2) Grow out of it: The problem will eventually or dramatically disappear without any interference or effort.
       Examples: "When she gets older, she'll be different." (E: "How will she become different?") "When she gets older she'll just change because grown-ups aren't like that."
       "One day she'll just wake up and feel different and not want to be like that ever again."
    (3) Self-initiated change but involving others: Change relies largely upon the character's efforts but definitely involves others as reinforcers.
       Examples: "He'll try one day to be friendlier and everyone will be so happy and nice to him that he'll feel different."
       "He'll practice over and over again until he understands and then they'll see he's good enough to play so they'll ask him and he'll say yes."
       "She'll be so sad that one day she'll just tell her parents and they'll talk to her and she'll get unlonely."
(4) **Other-initiated change**: The actions of others induce the change.

Examples: "She'd change if other people tried really hard to get her to play and finally she did and had a good time."

"They should send him to a school where they give lots of help to learn better. Special schools for mentals."

7. IQ: "Would it be hard or easy for X to change?"

CC: (1) Hard
    (2) Easy
APPENDIX J

Proportions of Categorized Interview Data Yielding Nonsignificant Differences

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<tr>
<td>Sandy</td>
<td>.47</td>
</tr>
<tr>
<td>Dependent Variable</td>
<td>Proportion by Grade</td>
</tr>
<tr>
<td>----------------------------</td>
<td>---------------------</td>
</tr>
<tr>
<td></td>
<td>2</td>
</tr>
<tr>
<td><strong>Difficulty of Change</strong></td>
<td></td>
</tr>
<tr>
<td>(Hard)</td>
<td></td>
</tr>
<tr>
<td>Chris</td>
<td>.52</td>
</tr>
</tbody>
</table>

*a These questions had only two possible answers or categories so only one proportion is reported. The numbers presented are the proportions of children who selected the answer in parentheses under the specific question.