INTENTIONALITY JUDGEMENTS AND ADAPTIVE BEHAVIOUR
IN SPECIAL CLASS AND REGULAR CLASS CHILDREN
OF EQUIVALENT AGE AND IQ

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## CONTENTS

<table>
<thead>
<tr>
<th>CHAPTER</th>
<th>PAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABSTRACT</td>
<td>1</td>
</tr>
<tr>
<td>I. INTRODUCTION ... ... ... ... ... ... ... ...</td>
<td>3</td>
</tr>
<tr>
<td>II. REVIEW OF THE LITERATURE AND OUTLINE OF EXPERIMENTAL HYPOTHESES ...</td>
<td>8</td>
</tr>
<tr>
<td>I. The social adjustment of special class children compared with the social adjustment of their counterparts in regular classes ... ... ...</td>
<td>9</td>
</tr>
<tr>
<td>II. Moral judgement and social adjustment</td>
<td>18</td>
</tr>
<tr>
<td>III. Experimental hypotheses</td>
<td>29</td>
</tr>
<tr>
<td>III. METHOD ... ... ... ... ... ... ... ...</td>
<td>31</td>
</tr>
<tr>
<td>I. Subjects ... ... ... ... ... ... ... ...</td>
<td>31</td>
</tr>
<tr>
<td>II. Adaptive Behaviour Scale ... ... ... ...</td>
<td>31</td>
</tr>
<tr>
<td>III. Assessment of Intentionality ... ... ...</td>
<td>34</td>
</tr>
<tr>
<td>IV. Procedure ... ... ... ... ... ... ... ...</td>
<td>36</td>
</tr>
<tr>
<td>V. Assessment of Additional Factors</td>
<td>39</td>
</tr>
<tr>
<td>VI. Statistical Analyses ... ... ... ...</td>
<td>41</td>
</tr>
<tr>
<td>IV. RESULTS AND DISCUSSION ... ... ... ... ...</td>
<td>42</td>
</tr>
<tr>
<td>I. Social Adjustment and Class Placement</td>
<td>42</td>
</tr>
<tr>
<td>II. Intentionality and Class Placement</td>
<td>45</td>
</tr>
<tr>
<td>III. Additional Exploratory Analyses</td>
<td>51</td>
</tr>
<tr>
<td>V. SUMMARY AND CONCLUSIONS ... ... ... ... ...</td>
<td>60</td>
</tr>
<tr>
<td>I. Limitations of the Present Study ... ... ...</td>
<td>64</td>
</tr>
<tr>
<td>II. Future Research Needs ... ... ... ...</td>
<td>65</td>
</tr>
<tr>
<td>REFERENCES ... ... ... ... ... ... ... ...</td>
<td>69</td>
</tr>
<tr>
<td>APPENDICES ... ... ... ... ... ... ... ...</td>
<td>85</td>
</tr>
</tbody>
</table>
# List of Tables

<table>
<thead>
<tr>
<th>Table</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Age, IQ and Socioeconomic Data for Experimental Groups</td>
<td>32</td>
</tr>
<tr>
<td>2.</td>
<td>Analysis of Variance of Total Maladjustment Scores</td>
<td>43</td>
</tr>
<tr>
<td>3.</td>
<td>Analysis of Variance of Total Intentionality Scores</td>
<td>46</td>
</tr>
<tr>
<td>4.</td>
<td>Analysis of Variance of Smack Scores</td>
<td>48</td>
</tr>
<tr>
<td>5.</td>
<td>Analysis of Variance of Withdrawal Scores</td>
<td>52</td>
</tr>
<tr>
<td>6.</td>
<td>Analysis of Variance of Overt Scores</td>
<td>53</td>
</tr>
<tr>
<td>7.</td>
<td>Product-moment Correlation Co-efficients Between Time in Special Class and Measures of Maladjustment and Intentionality for the Total (N = 20) Special Class Group</td>
<td>57</td>
</tr>
</tbody>
</table>
## LIST OF FIGURES

<table>
<thead>
<tr>
<th>FIGURE</th>
<th>PAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Scores on Overt Scale for Experimental Groups</td>
<td>54</td>
</tr>
<tr>
<td>2. Illustrations for Story Pair D</td>
<td>89</td>
</tr>
</tbody>
</table>
ABSTRACT

An attempt was made to determine the extent to which intentionality judgements differentiate special class children from those of equivalent IQ who remain in regular classes. Despite criticism that adaptive behaviour is a vague domain which presents serious measurement difficulties, there has been considerable reaffirmation of the importance of adaptive behaviour as a component of mental retardation. Approximately 30% or less of children within the 50-75 IQ range in New Zealand attend special classes. It is thus apparent that factors in addition to IQ are being used to determine special class placement. Available research findings suggest that social maladjustment is not inevitably linked with low intelligence and some local research indicates that children placed in special classes and those of equivalent IQ who remain in regular classes differ in terms of their social adjustment. The present study investigated the possibility that maturity of intentionality judgements is associated with maturity of social adjustment in mildly retarded children.

Twenty children attending special classes were matched on age, sex and IQ with 20 children attending regular classes. Subjects were administered individually the AAMD Adaptive Behaviour (AB) Children's Form Part II, and an intentionality judgement scale and transcripts were made of the subjects' responses during testing.

As predicted, the special class children achieved lower scores on the AB scale than did the regular class
subjects thus indicating less adequate social adjustment on the part of the special class children. More significantly, the special class subjects achieved significantly lower intentionality scores than did the regular class subjects. It was thus concluded that intentionality judgements differentiate special class children from those of equivalent IQ who remain in regular classes and that ability to take account of intentions is associated with social adjustment in mildly retarded children. The results were discussed in terms of the criteria used for special class placement and the possible effects of special class attendance.
CHAPTER I
INTRODUCTION

Social incompetence has long been considered an essential criterion for defining mental retardation (Doll, 1962). However the ease of assessment and the seeming definitiveness of the IQ criterion has tended to overemphasise the importance on intelligence testing in the classification of the mentally retarded. The lack of an adequate index of social competence has undoubtedly contributed to this emphasis. The American Association on Mental Deficiency's (AAMD) definition of mental deficiency (Heber, 1961b) reaffirmed the importance of the social adaptation component, and this has been adopted by the World Health Organization and by most Western countries. Inclusion of the social adaptation component by the AAMD has however met with considerable criticism. Clausen (1972) for example, criticised the AAMD's incorporation of adaptive behaviour into its definition and argued that adaptive behaviour is an ill-defined and elusive concept. Unfortunately, the AAMD's own definition of adaptive behaviour viz., how,"the individual copes with the natural and social demands of his environment,(p.61)" (Heber, 1961a) says little about the specific types of problems faced by special class children or about what in fact differentiates them from children of equivalent IQ in regular classes.

In New Zealand, as in most western countries, special provision is made within the education system for mildly retarded children (IQ 50-75) but fewer than 30% of
children within this IQ range attend special classes (Department of Education Report, 1972). Allowing for those children living in areas where there are no special classes and for a small number who are awaiting placement, it would appear (in the absence of evidence to the contrary) that the majority of children within the 50-75 IQ range continue to be acceptable within regular classes. It seems then that in New Zealand, factors other than IQ are considered when placing children in special classes. There is some local evidence (Milne, 1973) that ability to cope socially is one such factor and some overseas studies (Mullen and Itkin, 1961; Johnson and Kirk, 1950) give support to the contention that social maladjustment and rejection by peers is often the reason for initial referral to special class. There is some evidence then to suggest that locally the social adjustment component of the AAMD definition is in fact used and that social adjustment level is likely to be a major characteristic which differentiates between special class children and those of equivalent IQ who remain in regular classes.

As Clausen (1972) points out there is a need for special classes to provide something distinct from merely downgraded education. While the behavioural characteristics of special class children are not adequately defined it is not possible to determine accurately their special educational needs. Without such knowledge it is difficult to formulate a special class programme of work which is appropriate to the children concerned. Knowledge of the general social adjustment status of special class children, while necessary is not, however, sufficient. The specific
nature of the social adjustment problems faced by such children must be determined if appropriate programmes are to be provided.

Leland (1972) has suggested that in applying the social adjustment component of the AAMD definition it is necessary to know what behaviour impairs the individual's ability to survive as a member of a social unit. It is the performance of that behaviour, he believes, which threatens the community sufficiently for it to ask for the child's removal. In the present study the regular class is viewed as one such community and an attempt is made to gather information about the inadequacies that characterise children placed in special classes and differentiate them from those of equivalent IQ who continue in regular classes. The present study is concerned with the general social adjustment status of children within special classes and with what is believed to be a specific aspect of social adaptation - the ability to take account of another's intention.

Piaget (1932) and Harrower (1934) both stress the importance of social decentration for adequate social adjustment. Breznitz and Kugelmass (1967) believe that a child's ability to make use of the principle of intentionality should make for potentially more efficient handling of his social environment. The importance of intentionality in the social development of children is also emphasised by Bobroff (1960), King (1969) and Preston (1964). Within the classroom, where more emphasis is now placed on group activity and group interaction, the capacity to take account of the intentions of others has probably become more important for a child's acceptance
by his peers. Accidents, benevolent acts, and acts with malicious intent must be distinguished from one another for appropriate responses to be made. Particular social rules must be observed in order to remain part of the group. Maturity in ability to take account of the intentions of others can thus be seen as playing an important part in such social activity.

A number of studies (Caring, 1971; Cudrin, 1966; Johnson, 1959; Lee, 1968; McDonald 1957; Preston 1964) found evidence that children within the special class intellectual range are more likely to make less mature moral judgements than children of higher intelligence. However Bobroff (1960) argued that while mentally retarded children are some two years retarded in moral development, they eventually reach the same levels of maturity as normal children and that their development parallels that of normal children.

Although there is evidence that children within the special class intellectual range are less capable of mature moral judgements than children of higher intellectual ability, there is no entirely adequate study of intentionality, which involves children within the special class intelligence range. Studies in this area should have the potential to contribute to an understanding of the special class child's deficiencies in particular skills associated with the capacity for social adjustment.

The present investigation seeks to identify characteristics that differentiate children placed in special classes from those of equivalent IQ who remain in regular classes. The main concern of the research is to
investigate the possibility that ability to take account of the intentions of others is one such differentiating characteristic and is closely associated with maturity of social adjustment. The need to identify aspects of adaptive behaviour that can be described objectively and measured has often been expressed (e.g., Clausen, 1972). The present study is addressed to this problem. Further, the objectives are closely related to the need to understand the specific problems faced by the special class children, a prerequisite to providing programmes which are appropriate to their needs.
CHAPTER II

REVIEW OF THE LITERATURE AND OUTLINE
OF EXPERIMENTAL HYPOTHESES

Social incompetence has long been regarded as an important component of an adequate definition of mental retardation. In Britain and in many parts of Europe it was for many years the sole basis upon which definitions of mental retardation were formulated (Clarke and Clarke, 1965). The 1961 AAMD definition of mental retardation (Heber, 1961b) strongly reaffirmed the importance of social incompetence and this definition is now widely accepted throughout the western world. Many writers however, (e.g. Clausen, 1972) have argued that social competence is at present too vague a concept for practical purposes. At the same time the pattern of New Zealand special class admissions indicates that factors in addition to low intelligence are taken into account when a child's placement in a special class is considered. In New Zealand less than 30% of children within the IQ range 50-75 attend special classes. Some children in this IQ range are probably awaiting either psychological assessment or actual placement in a special class and others may live in areas without special classes. Nevertheless in the absence of evidence to the contrary it would appear that a considerable number of children in the 50-75 IQ range continue to cope satisfactorily in regular classes.
A number of studies have been concerned with the relationship between low intelligence and social maladjustment but there is no conclusive support for the contention that these two characteristics are inevitably linked (Gardner, 1966). Moreover the results of subsequent studies, e.g. Maycock (1971), Norton (1969) have also been inconclusive. The question then arises as to which characteristics differentiate special class children from those of equivalent IQ who remain in regular classes. The present study is concerned specifically with this question.

I. THE SOCIAL ADJUSTMENT OF SPECIAL CLASS CHILDREN COMPARED WITH THE SOCIAL ADJUSTMENT OF THEIR COUNTERPARTS IN REGULAR CLASSES

An early study was undertaken by Bennett (1932) who compared slow learners in regular classes with children in a special class. He concluded that in the area of school citizenship, (an aspect of social adjustment), those in special classes were better adjusted than their regular class peers. While it would be of interest to have critically examined Bennett's work unfortunately only a brief summary of the study is available.

Martin (1941) examined the personality and social traits of 374 children with IQ's between 50 and 85, (mean IQ 67). The children were drawn from special schools, elementary schools, "subcentre" schools and a high school. The elementary from of the California Test of Personality (CTP) was used but details on test administration were not supplied. The CTP provides indices of "Self Adjustment" and "Social Adjustment"
based on the responses to 12 questions in each of six
categories under each of the two main classifications.
The median score for both "Self Adjustment" and "Social
Adjustment" was 45, a score only five points below the
norm achieved by the 1,000 pupils on whom the test was
originally standardized. The special class children
exceeded the experimenter's predictions and achieved a
score which, according to the authors of the test, was
"about average" for children in grades four to nine.
Martin concluded that the personal and social adjustment
of the children was "about average", despite their serious
mental retardation. It is difficult to interpret the
results of this study. The groups studied were the
"graduating classes", from each type of school. It is not
clear from the report whether the children studied were
a group of retarded children who were about to move back into
the normal school setting, or those about to go out to work
(which in some cases at least seems unlikely) or whether
the children were being considered for promotion to higher
level special education facilities. There is certainly
some doubt that they were a representative sample of the
children who attended these types of special schools. The
writer also has reservations regarding the validity of
the California Personality Test for evaluating the social
adjustment of such children.

Kern and Pfaeffle (1962) compared the social
adjustment of retarded children in special classes with
that of a group of children of equivalent IQ in regular
classes. Three groups of children of low intelligence were
involved: the first attending a special class for retarded
children in a regular school, the second attending a special
school for retarded children while the third attended regular classes while they awaited special class placement. The children were matched for sex, CA, MA, and IQ. The Social Adjustment section of the CTP (elementary form) was used. The questions were read to the subjects and their answers recorded. This procedure was said to yield an "objective measure of social adjustment". The response patterns of the special class and the special school pupils were similar and appeared to almost parallel each other. The special school pupils scored slightly higher than the special class pupils on all subtests except for the items dealing with anti-social tendencies. The regular class pupils showed a different pattern of responses and their scores were inferior to those of the special school children on all six subtests, i.e. Social Standards, Social Skills, Anti-Social Tendencies, Family Relations, Community Relations and School Relations.

The social adjustment of the special class children was generally better than that of the children who continued to attend regular classes. The difference between the groups was significant, however, only on the subtest dealing with School Relations. The results also indicated that retarded children in the regular class were rejected more often by teachers and classmates than were pupils in either special classes or special schools. It was concluded that children of low intelligence in special classes or special schools for retardates show much better social adjustment than children of equivalent intelligence in regular grades.

Unfortunately, it is difficult to find adequate support for this conclusion on the basis of the details
provided. The following points need to be taken into account when interpreting the results:

(a) The validity of many questions administered, for assessing a child's adjustment to school, seems questionable e.g. "Do you feel that any of the teachers are mean to the children?" "Would you like it better if you could stay at home instead of going to school?" Such questions would appear to be leading questions and few retarded children would be likely to give negative answers to questions of this type.

(b) A request for a "yes" or "no" answer to questions such as "Do you like to stay away from pupils of the other sex at school?", may or may not be relevant to the question of a child's social adjustment at school. Clearly however they are not easy questions for a child of low intelligence to grasp and at best seem dubious measures of adjustment.

(c) The "objectivity" of the assessment, stressed by the authors is not apparent just because neither peers nor teachers made the assessment of social adjustment. For example a backward child's response to a question such as e.g., "Do many of the children at school try to keep away from you?" appears to be no more objective than similar data obtained from other pupils or from the teacher. The group of regular class children assessed comprised only children already selected for special classes but awaiting placement. This group is not a representative sample of children of low intelligence who remain in regular classes. Thus the claim that children of low intelligence in regular classes are less well adjusted than those in special classes does not seem justified.
Ellenbogen (1957), Jordon (1959) and Mullen and Itkin (1961) all compared the social adjustment (teacher ratings) of special class children with those of children of equivalent IQ in regular classes, and found children in special classes to be better adjusted. Mangus (1950) and Blatt (1958) also used rating scales but obtained inconclusive results.

Two further studies also made use of teacher rating procedures and found little difference between children of low IQ in regular and special classes. Ainsworth (1959) compared the social and emotional status of children of low intelligence in (a) a regular class (b) a regular class with an itinerant specialist and in (c) a special class. Two behaviour check lists and a teacher rating scale were used to evaluate the children's social and emotional status. After studying the groups for over a year, Ainsworth found no differences among the three groups, in observed behaviours and seriously deviant behaviours. Flynn and Flynn (1970) concluded, after comparing children of low intelligence awaiting special class placement with those already in special classes, that special and regular class children had a similar pattern of social adjustment. The most interesting comparison, between that group of retarded children who continue in the regular class and those selected for placement in the special classes, was not undertaken in this case.

In brief, of the studies that have incorporated teacher ratings, most have been inconclusive though three have shown more favourable adjustment in the special class children. Moreover, even when significant intergroup differences are obtained, interpretation of the
differential ratings is, unfortunately, seldom straightforward. Adjustment ratings made by the special class and regular class teachers may reflect different frames of reference and may also reflect the special class teacher's greater readiness to accept more deviant behaviour from his pupils. Itkin (1960) examined a commonly used rating scale and concluded that scores were influenced by the frame of reference of the teachers. It seems that caution should be exercised in interpreting results of comparison studies based on teacher rating procedures since they may well reflect the teacher's frame of reference rather than the special class child's social adjustment.

Social adjustment may also be examined in terms of the degree of acceptance shown to a child by his peers. Johnson and Kirk (1950) made use of peer group judgements and found inappropriate behaviour was an important reason for the peer group rejection of regular class children of low intelligence. Some sociometric studies, Dunn (1963), Johnson (1950) and Miller (1956) also provide evidence that children of low intelligence in the regular classes are frequently rejected by their peers for unacceptable behaviour. Goodnick (1957) also made use of peer group rating methods and derived results identifying a number of behaviour problems exhibited by regular class children of low intelligence.

Goodman, Gottlieb and Harrison (1972) investigated the social acceptance of children with IQ's between 50 and 75 who were totally integrated into the academic routines of a non-graded school; a group of average ability children; and a group of children from a special class that was segregated apart from brief contact with the
rest of this school during recess periods. The normal children were asked to label as "friend", "alright", or "wouldn't like", figures of children presented in a booklet form along with the names of non-retardedes and the retardedes that they had most potential contact with. The results, although based on very small numbers, indicated that the integrated low intelligence group were rejected significantly more often than the segregated special class group by male raters but not female raters. The authors suggested that the special class group may have been rejected less frequently because they were labelled as different and the normal child's expectations for them, may have been lowered. It was also suggested that the integrated low IQ group were expected to adhere to conforming behavioural standards but did not. The authors argued that the higher rejection of both of the low intelligence groups compared with the control group of normal children may have been due to the fact that both groups of retarded children were transported into the school from other neighbourhoods. As other children in the school were community residents, the raters may well have been rejecting the out-of-community children simply because they had not had opportunities to play with them after school. The integrated low IQ group were not children who had remained in a normal class setting because of their satisfactory adjustment, but rather were a selected group bused in from a different school area. The criteria for selection of this group were not mentioned but it seems likely that the integrated low IQ children had been found unacceptable in their own school setting or had been bused in for the purpose of the study.
It is possible that the indices of social adjustment used in this study may sample more subtle social behaviours than can normally be observed by the teacher. However, such methods may not be entirely valid measures of social behaviour. It is not difficult to imagine a variety of reasons for peer group rejection that have little to do with a child's behavioural capacity for social adjustment and are outside the child's control e.g., a child's physical appearance, or the clothes he has to wear.

Interpretation of studies of social adjustment of the mentally retarded is difficult. There have been a variety of judges of social adjustment e.g., the peer group of retarded children, normal children, teachers. Furthermore the retarded have been compared with a variety of groups e.g., non-retarded children, children in their own class, children in different classes. Gardner (1966) examined 32 studies in this area and concluded: "In view of the deficiencies of the studies ... and the conflicting results it can only be concluded that the question of behaviour adjustment differences between the special and regular class students is presently unanswered (p. 104)." Additional studies reviewed in this section do not appear to have altered this situation. One of the primary reasons for the inconclusive results achieved by studies in this area has been the lack of an adequate measure of social adjustment. Although it seems likely that special class children differ in terms of their social adjustment from children within the same IQ range who remain in the regular classes, it has proved difficult to find an adequate basis for examining such differences. Measures of adjustment that have been based on the teacher's judgement of vague, ill defined
 behavioural categories probably reflect the teacher's personal response to a child rather than the child's general ability in adaptive behaviour. Measures not specifically concerned with the social adjustment of the mentally regarded are not adequately designed or standardised for use in comparison studies involving retarded children. The paucity of adequate measures of adaptive behaviour, particularly those designed for use with the mentally retarded, has been emphasised by a number of writers (e.g. Heber, 1962; Leland, 1972).

In the present study, the AAMD Adaptive Behaviour (AB) Scale - Part II (Leland, Nihira, Foster and Shellhaas, 1970) was used. This scale was selected for several reasons. Firstly, it offered a measure of adaptive behaviour designed specifically for use with mentally retarded children. Indeed the creation of the scale was a direct result of an attempt to give more precise meaning to the concept of adaptive behaviour among retarded children. Secondly, the provision (within the scale) of detailed descriptions of specific maladaptive behaviours which could be checked by the rater should have helped to overcome the fundamental problem of the subjectivity of the rater's observations. Thirdly, the scale could be easily completed by a teacher and sampled behaviours easily observable during "in class" activities.

As Leland (1972), a joint author of the AB scale noted, the disagreement found between two observers' descriptions of a subject's behaviour is notoriously high. Although no scale based on teacher observations can entirely overcome the different frames of reference brought to the observation task by different teachers, the
AB scale's objective descriptions of behaviour help to do this. Further the comparatively high mean reliability ($r = 0.61$) for Part II of the scale suggests that some headway in overcoming this problem has been made.

In the present study a prior assumption has been made viz., that social maladaptation characterises that group of children with low intelligence who are placed in special classes. The results of local research (Milne, 1973; Winterbourn, 1944) and the results of a small pilot study undertaken provide some support for this assumption. However a check on the social adjustment of special class children was obviously necessary and the AAMD AB scale was used for this purpose. It was expected that children in special classes matched for sex, intellectual level and age with children in regular classes would be significantly more maladjusted in terms of the results obtained from using the AAMD Adaptive Behaviour Scale.

II MORAL JUDGEMENT AND SOCIAL ADJUSTMENT

The present study is concerned with adaptive behavioural characteristics which differentiate special class children from those of equivalent IQ who remain in regular classes. A particular aspect of social decetration, ability to take account of intention, is considered to play a major role as a cognitive skill underlying the capacity for mature social adaptive behaviour, especially interpersonal relations and one which is itself developed by social interaction (Bobroff, 1960; Breznitz and Kugelmass, 1967; King, 1969).
In order to investigate the possible relationship between adaptive behaviour and ability to take account of intention, the adaptive behaviour of a group of special class children was assessed using the AB scale. A group of regular class children matched (with the special class group) on IQ, age and sex was similarly assessed. It was expected that a difference would be found between the two groups on the AB scale with the special class group obtaining the higher maladjustment scores. The two groups would then be assessed using two measures of intentionality to ascertain whether the group which was less well adjusted was also less able to take account of intention. It was considered that this method of investigation would provide information on the relationship (if any) between social adjustment and intentionality in mildly retarded children. This procedure should also allow the relationship between special class placement and ability to take account of intention to be investigated.

(1) **Piaget's Studies of Moral Development**

Piaget's (1932) work in this area has stimulated considerable research. On the basis of this research Kohlberg (1964) has concluded that at least six aspects of moral judgement in Piaget's (1932) analysis, including intentionality in judgement, should be regarded as "genuine dimensions of development (p. 398)." Piaget (1932) argued that the cognitive limitations of the child of 3 - 8 years compel him to view rules as fixed external things, rather than as instruments of human purpose and value. This difficulty is attributed to the child's "realism" or inability to distinguish between subjective and
objective aspects of experience and his "egocentrism"
or inability to distinguish his own perspective on events
from that of others. He described two distinct processes,
objective and subjective responsibility, one of which on
the average precedes the other in the moral development
of the child, although the two partially synchronize.
"Objective responsibility" refers to the literal evaluation
of an act in strict conformity to a rule rather than
by the intention of the actor whereas "subjective
responsibility" implies consideration of the actor's
intentions in evaluating the act. The child who takes
account of the intentions of the person about whom he is
asked to make a moral judgement is regarded as morally
more mature than the child whose judgement reflects
"objective responsibility".

According to Piaget (1932), young children tend to
calculate an act as bad mainly in terms of its actual physical
consequences whereas older children judge an act as bad
in terms of the intent to do harm. If children are asked
who was worse - a child who broke five cups while helping
his mother set the table or a boy who broke one cup while
stealing some jam, almost all the four year olds would say
the child who committed the larger accidental damage was
worse. The majority of nine year olds would say the
"thief" was worse. Research supporting Piaget's analysis
has been reported by Boehm and Nass (1962), Caruso (1943),
Janis (1961), Lerner (1937), MacRae (1954) and Medinnus
(1957). In addition, numerous studies have provided support
for the principle underlying Piaget's description (Arkosi-
Udrary, 1962; Armsby, 1969; Bobroff, 1960; Havenga, 1958;
Hayes, 1971; Johnson, 1962; Kugelmass and Breznitz, 1968;
Kugelmass, Breznitz and Breznitz, 1965; Lugassy, 1952; McKechnie, 1971) including two studies conducted over 20 years before Piaget's (1932) book (Barnes, 1902; Schallenberger, 1894).

Kohlberg (1964) pointed out that while specific cultural factors appear to stimulate or retard age trends of development on the Piaget dimension they do not appear to actually cause the major age shifts or trends observed. He noted that the acquisition of intentionality (along with other aspects of moral development identified by Piaget) is primarily a facet of cognitive development.

(2) Low intelligence and intentionality

A number of studies (Cudrin, 1966; Johnson, 1959; Lee, 1968; McDonald, 1957) have shown a relationship between lower intelligence and less mature levels of moral judgement. Others indicated that social class and general moral development are related; Berkowitz (1964), Harrower (1934), Kugelmass and Breznitz (1968), and McKechnie (1971). Few studies however, have been specifically concerned with the relationship between low intelligence and intentionality.

Brennan (1962) examined the relationship between low intelligence and intentionality in moral judgement. He was however primarily concerned with the relation between social adaptation and different levels of intelligence. Seven experimental groups of 20 children were selected from 548 primary school children. The experimental groups were matched for size of family and socioeconomic status (father's occupation). The children were tested for intelligence level on the Cornwall Orally Presented Group Test, and a test based on Piaget's analysis of intentionality
was administered individually. The children were grouped into three categories (bright, average and dull) and three chronological age groupings (a total of nine groups). Brennan found that for children with CA or MA less than 9½ years, CA and MA were significantly related to maturity or moral judgement. On the other hand in children with CA and MA greater than 9½ years, CA was still strongly related to maturity of moral judgement while the relationship with MA was markedly reduced. There is, however, insufficient detail on the study for adequate evaluation of it. In view of the likely relationship (Caring, 1971) between verbal facility and moral judgement level, it would have been interesting to have seen if the relationship between MA and maturity of moral judgement would have declined with age if a less verbally biased individual test of intelligence (e.g. Raven's PM) had been used.

A study by Preston (1964) indicated that maturity of moral judgement and mental age were closely associated. The Social Problems Test which was developed by the author for the study, assessed ability to take account of intention and other aspects of moral judgement. However not all the children who achieved low scores on the test had low mental ages. Unfortunately details on number of subjects, ages and more specific details on the content of the test items were not provided.

Kemmler, Windheuser and Morgenstern (1970) studied the responses of 8 and 9 year old boys to Piaget's moral judgement problems and found a moderate positive correlation between scores on the moral judgement tests and intelligence test scores.

Caring (1971) gave 86 children (W.I.S.C. IQ range;
80 - 144, CA range 10.4 - 12.3 years) a moral judgement test (pencil and paper type) representing Piaget's concepts and modes of evaluation of moral judgement. The major finding was that intelligence was the most closely related of the variables evaluated in relation to maturity of moral judgement. However, although Caring excluded children with perceptual disorders from the study (because she wanted to use the Embedded Figure Test of field dependency) she did not make any assessment of reading ability. It is clear that lack of reading ability, frequently related to low intelligence, would put children of low intelligence at a very serious disadvantage in a pencil and paper test. The validity of using the Moral Judgement Test with such children therefore seems questionable. Caring did, however, acknowledge that the differing verbal ability of the children created a problem with regard to testing.

In summary while only a few studies have examined the relationship between low intelligence and intentionality in moral judgements, those that have been undertaken provide some support for the view that children within the special class IQ range are likely to take less account of another's intentions than children of the same socio-economic status and sex but of higher IQ. In view of the diversity of undesirable factors in the home backgrounds of the mildly retarded (McCandless, 1964), Kohlberg's (1964) emphasis on the influence of specific cultural factors on the particular growth patterns of maturity in children's moral judgements needs to be kept in mind. It may well be that undesirable factors in the home have more influence on the retarded child's ability to take account of intention
than has intellectual level per se.

(3) Social Adjustment and Maturity of Moral Judgement

Breznitz and Kugelmass (1967) hinted at the importance of the relationship between intentionality in moral judgements and general social adjustment, when they said, "it is presumed that all this cognitive equipment (the full use of the principle of intentionality) should make for potentially more efficient handling of his social environment (p. 479)." Hogan and Henley (1969) likened social interaction to the playing of a game. They argued that in the realm of social interaction the task for both observer and participant is one of discovering the rules. As they pointed out, numerous writers noted the existence of a rule system beneath the surface of interpersonal relations and drew an analogy to games, e.g., Berne (1964), Coleman (1968). Hogan and Henley also pointed out that the basis of a morality is a system of rules of conduct which defines a network of reciprocal rights and obligations which prohibits at least gross acts of malevolence. One such gross act would be the equal punishment of those who cause harm by intent and those whose harm is the result of unintentional acts. Piaget (1932) wrote that, "all morality is to be sought for in the respect which the individual acquires for these rules (p. 1)"

Bobroff (1960) replicated some of Piaget's (1932) studies. He sampled the rule characteristic and the game characteristic when he investigated socialization in normal and educable mentally retarded using selected games of marbles to observe a child's performance in social situations. The subjects were 32 regular class children (IQ range 90+) and 32 special class children (IQ range 60 - 80). An outline
of stages through which the children progressed was presented and some aspects of these stages are of particular interest when considering social adjustment and maturity in the use of the concept of intention. Normal children of six years of age appraised situations in a personal subjective way and this tendency was still apparent in the mentally retarded children of eight years of age. At the age of eight years, normal subjects did not perceive cause and effect operating in human relations and they viewed outcomes as fortuitous in nature and independent of personal action. A similar tendency was observed in mentally retarded 10 year olds. At around 10 years of age, the normals began to incorporate the point of view of "models" as a basis for forming their judgements, they began to seek the many values offered by group association and were willing to subvert some of their private (objective eccentric) inclinations to facilitate team activity. The retardates did not show this development until approximately 12 years of age. This development led towards the point where the children were more able to understand reasons for rules in terms of interrelationships among groups of people.

Two important points are suggested by this research. Firstly, the way in which the stages in the development of rule systems and social interaction parallel closely the patterns that have emerged from the study of the development of maturity in moral judgement in general and the use of the concept of intentionality in particular. Secondly, the pattern that emerged showed the retardate's pattern of development to be similar to that of the normal child's although particular stages were reached approximately
two years later in the mentally retarded than in the normals. Bobroff (1960) thus saw the ability to take another point of view as an important element in the beginnings of socialized behaviour. A number of other studies support this view.

Dymond, Hughes and Raabe (1952) undertook a study of empathy in school age children and found a positive correlation between social insight and popularity among peers. The more popular children were more aware and better able to assess accurately the feelings of others and were better able to identify those feelings and attitudes that could be admitted to. Piaget (1932) and his followers consider such ability as evidence of decentralization of thought. Piaget (1932) maintained that while the child remains egocentric in his thinking and thus unable to see a point of view that is not his own he is incapable of logical argument. Harrower (1934) has argued that "egocentricity will diminish only when the physical world forces its unyielding structure on him, its "otherness" to himself; and when social contact forces him to see other people's wishes, points of view and positions (p. 77)" Keasey's (1971) study, in which he found maturity of moral judgement positively related to the extent of social participation of the child whether this participation was judged by self, peers or teachers, provides support for viewing social adjustment and maturity of moral judgement as closely associated.

Harrower (1934) made the further point that diminishing egocentricity which is evidenced in the maturing ability of children to cope with the problems of conservation and causality will, "also be evidenced in changing moral conceptions (p. 78)." The importance of social interaction
in developing growth toward decentration has also been emphasised by the work of Smedslund (1968).

The relationship between decentration of thought in general, and the development of specific moral concepts, such as intentionality, in particular, and social interaction have been investigated by several researchers. Brennan (1962) found a positive relationship between moral maturity and an aspect of social adaptation, (social perspective), a measure derived from scores achieved by the children on the Manchester Scale of Social Adaptation (Lunzer, 1959). Of particular interest was the fact that a third of the 140 children involved were of below average intelligence.

Preston (1964) used a Social Problems Test with intentionality elements as a measure of moral judgement and found a significant relationship between maturity of moral judgement, and school adjustment and school work and grades. There was also a strong relationship between mental age and maturity of moral judgement. A definite relationship between maturity of moral judgement and personal and social adjustment was also found. It was concluded that although intellectual development and maturity of moral judgement are closely related parallel processes the latter was more closely related to social development than was the former. The published report of this study does not include details of the age and intelligence of the subjects or the specific problems posed in the test of moral judgement.

King (1969) studied 144 boys and girls of mixed socioeconomic backgrounds, at three age levels. Intention versus accident distinctions and understanding of
unconscious motivation were assessed in individual testing sessions with motion picture and story techniques respectively. Lack of specific detail regarding the instruments used in assessing unconscious motivation precludes adequate interpretation of this aspect of the study. Interpersonal skills and other skills were assessed by teachers who rated videotapes of the children in standard group situations. Appropriate use of both aspects of intention concepts showed a positive relation to extent and direction of children's interactions. The author found that important intention concept development occurs between the ages of four and nine and that individual differences in such development are associated with individual differences in interpersonal behaviour. Ethnic group differences found in the development of the ability to distinguish intention from accident suggested to the author that this should be considered a social-cognitive rather than a purely cognitive phenomenon. This conclusion seems consistent with Kohlberg's (1964) emphasis on the importance of specific cultural factors in the individual development of moral development dimensions.

In brief, there appears to be a degree of support for the contention that the development of social adjustment and moral judgement are related. Most of the studies undertaken in this area however are only briefly reported in journals as unpublished theses or dissertations, or the reports are unavailable in New Zealand. There are also published studies which have neglected to include details on the subjects involved and several of the studies provided little information about the test of moral judgement used (e.g. Zavalloni and Mercatali, 1958). The relationship between
social adjustment and maturity of intentionality judgements has not been adequately investigated in children of low intelligence though Brennan's (1962) findings suggest that such a relationship is likely.

III EXPERIMENTAL HYPOTHESES

The AAMD definition of mental retardation (Heber, 1961b) has reaffirmed the importance of social adjustment as a behavioural component of mental retardation. A number of writers (e.g., Clausen, 1972) have been critical of the lack of behavioural underpinnings for this aspect of the definition, and have maintained that the social adjustment component is redundant. In his review of research, however, Gardner (1966) concluded that behavioural adjustment differences do not necessarily characterise children of low intelligence and subsequent research has supported this conclusion. In New Zealand less than 30% of children in the 50 - 75 IQ range attend special classes. It would thus appear that factors other than IQ are taken into account when special class placements are made. Moreover, some local research (Milne, 1973) supports the view that social adjustment is one factor which differentiates special class children from those of equivalent IQ who remain in regular classes. The results of a small pilot study carried out prior to the present investigation provided support for this view. Accordingly hypothesis 1 was thus formulated:

Hypothesis 1: Special class children matched for age, sex and intelligence (IQ 50 - 75) with children in regular classes will be significantly more maladjusted in terms of the results obtained on the AB Scale.
A number of studies involving normal children (e.g., Dymond, et al, 1952; King, 1969) and children of low intelligence (e.g., Preston, 1964) indicate that social adjustment and ability to take account of intention are closely related. Several other writers (e.g., Harrower, 1934; Keasey, 1971) underline the importance of the relationship between ability to take account of intention and social adjustment. In view of these findings and the likelihood that special class children are more socially maladjusted than children of equivalent IQ in regular classes, the following hypothesis was formulated:

**Hypothesis 2:** Special class children will obtain lower scores on the tests of intentionality judgement than those achieved by children of equivalent age, sex and IQ in regular classes.
CHAPTER III

METHOD

I SUBJECTS

The subjects were 20 children (10 boys and 10 girls) attending primary special classes and 20 children (10 boys and 10 girls) of approximately equivalent age and IQ who were enrolled in regular classes. Age, sex, socioeconomic (SES), and IQ data are presented in Table 1. The special class subjects were chosen at random (within sex groups) from Christchurch special classes. The regular class subjects were chosen from Psychological Service records. A group of 34 children (20 boys and 14 girls) who had scored within the 50 - 75 range on standardised individual intelligence tests (Stanford-Binet or WISC) and who were still attending regular classes in the Christchurch area were located. Six of these together with 4 special class children (a total of 6 boys and 4 girls) were selected for pilot study work. The final 20 regular class subjects were selected from the remaining pool of 28 children. An attempt was made to match the regular class and special class children as closely as possible on age and IQ - two variables which appear to be strongly related to intentionality judgements (Macrae, 1950, Krebs, 1965).

II ADAPTIVE BEHAVIOUR SCALE

The AAMD Adaptive Behaviour Scale - Part II (Leland, et al, 1970) was used to obtain behaviour ratings on all subjects. The scale was developed by the AAMD specifically
Table 1

Age, IQ and Socioeconomic Data
for Experimental Groups

<table>
<thead>
<tr>
<th>Group</th>
<th>CA (in months)</th>
<th>IQ</th>
<th>Socioeconomic Status*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regular class boys</td>
<td>124.20</td>
<td>71.80</td>
<td>4.00</td>
</tr>
<tr>
<td>SD</td>
<td>28.88</td>
<td>2.52</td>
<td>1.95</td>
</tr>
<tr>
<td>Regular class girls</td>
<td>117.30</td>
<td>69.70</td>
<td>4.20</td>
</tr>
<tr>
<td>SD</td>
<td>18.74</td>
<td>2.49</td>
<td>1.47</td>
</tr>
<tr>
<td>Special class boys</td>
<td>127.70</td>
<td>71.80</td>
<td>4.20</td>
</tr>
<tr>
<td>SD</td>
<td>22.15</td>
<td>2.71</td>
<td>1.17</td>
</tr>
<tr>
<td>Special class girls</td>
<td>119.30</td>
<td>68.00</td>
<td>4.40</td>
</tr>
<tr>
<td>SD</td>
<td>16.30</td>
<td>4.71</td>
<td>1.20</td>
</tr>
</tbody>
</table>

*SES ratings were derived from
Elley and Irving's (1972) scale.
to provide an objective description and assessment of an individual's adaptive behaviour. Part II of the scale is concerned with providing measures of maladaptive behaviour related to personality and behaviour disorders.

The authors of the scale suggest that anyone who personally knows or observes closely the behaviour of children to be rated can administer the scale. On this basis, the subjects' teachers were considered to be suitable raters, and a copy of Part II of the Adaptive Behaviour Scale (Children's Form) was sent to each teacher. With the agreement of the District Psychologist, the teachers were informed that the schedules were part of a follow up study of social adjustment of children who did not require complete psychological reassessment. The completion of the rating scales was thus presented to the teachers as an important professional responsibility.

Three scores were derived from the behaviour schedules. The first was the "Total Maladjustment" (TM) score which for each subject comprised the sum of the scores for each of the 14 domain areas. TM scores achieved, ranged from 0 to 72. The larger the TM score the greater the number of behaviours exhibited by the subject which were considered by the teacher to be maladaptive. An "Overt Maladaptive" (OM) score and a "Withdrawal" (W) score were also derived for each subject. The OM score was comprised of the sum of the scores in three particular domains, the "Violent and Destructive" domain, the "Antisocial" domain and the "Rebellious" domain. The W score represents the sum of the scores in the domains of "Withdrawal" and "Psychological Disturbance". Twenty seven of the 44 answers to questions in the schedule were used in compiling the OM and W scores.
III ASSESSMENT OF INTENTIONALITY

A measure of ability to take account of intention, based on that of Crowley (1968) was administered to all subjects. Crowley (1968) noted the lack of data on the discriminating value of the original story items used by Piaget (1932) in the measurement of intentionality. Boehm (1962), Durkin (1961), Medinnus (1959), and Nass (1964) have provided evidence to suggest that the maturity of response obtained from this type of measure relates to the specific situations depicted in the stories. In an attempt to overcome this problem, Crowley chose some of his own story items, some from Bandura and McDonald (1963), and some from Piaget (1932). These items were administered to a pilot group and the results were subjected to item analysis. On this basis story items that failed to discriminate adequately between children still at the objective stage and those at the subjective stage of moral development were discarded. The test used in the present study contained modified versions of the seven items from Crowley's scale which best differentiated between subjective and objective judgements.

Each item consisted of a pair of stories, one of which was an objective alternative (a child's accidental action which caused considerable damage) and the other a subjective alternative (a child's intentionally malicious act which resulted in minor damage). The stories were presented orally in conjunction with a series of coloured illustrations of the stories. A copy of the stories together with an example of the illustrations used in the present investigation is included in Appendix A.
The use of coloured illustrations in association with the oral presentation of the stories was an attempt to overcome the problem of misunderstanding by children of low intelligence. In previous studies (Abel, 1941; Whiteman and Kosier, 1964) failure to ensure adequate understanding of the stories by the children (IQ range similar to that of the present subjects) has resulted in dubious data. Such results probably reflect ability to understand the story as much as ability to take account of intention. On the basis of the pilot study changes were made in the stories and illustrations to adapt them to local conditions and make them simple enough to be adequately understood by the subjects. Understanding of the stories was examined by asking the children several questions about what each character in the story had done and the extent of damage that resulted. It was not considered necessary that the children recall the names of the characters but the story content was not considered suitable unless the pilot study subjects could recall and answer questions about the significant parts of each story after each pair of stories had been read and the illustrations presented.

In modifying the stories used by Crowley (1968) an attempt was also made to overcome criticisms made of this type of measure by Caruso (1943), Magowan and Lee (1970) and Pittel and Mendelsohn (1966). Stories were presented some with a girl as the main character and some with a boy as the main character and an attempt was made by choosing appropriate activities for the story characters, to give the impression that the characters were nearly the same age as the subjects. Only 7 pairs of stories were
used in the test because it was found, during the pilot study that after having been told and questioned about this number of stories the children became very restless and concentration lapsed.

IV  PROCEDURE

(1) Testing Procedure

The subjects were interviewed in a random order, and were administered the intentionality scale at school. The test was administered in the following way: for each story, each illustration associated with a particular part of the story was presented and the appropriate part of the story read, until all illustrations were in front of the child and the story completed. Following the presentation of the pair of stories the subject was asked the first standard question, "Which girl/boy is the naughtiest?"¹ He was then asked the second standard question, "Why?" Any further questions were framed in the light of the subject’s answer to the second standard question. Following Piaget (1932) the experimenter asked only enough questions to allow an indication of the subject’s reasoning behind the answer to the first standard question. The subjects were quite young children of low intelligence, and since such children can be easily confused and frustrated by repeated questioning, a very careful use of supplementary questions was necessary.

¹ The word "naughtiest" rather than naughtier was used because it was found during the pilot study that the word "naughtier" was confused with the word "naughty". The children involved in the pilot study responded without hesitation to "naughtiest".
McGowan and Lee (1970) have argued that the provision of a "forced choice" helps to compensate for differences in response fluency. This factor was thought to be of considerable importance in testing children of low intelligence and an attempt was made to take account of this by specifying the first and last questions in "forced choice" form, i.e. "Which boy is the "naughtiest"?" and "Which boy should get the biggest smack?"

The transcripts of the recorded interviews with 2 subjects are included in Appendix B. The dialogue between the researcher and the subject was recorded verbatim by the researcher taking written notes. On occasions when a long, rapid answer was given, as much as possible was recorded and the subject was asked to repeat his answer. While this procedure did not always allow a verbatim record of the dialogue there were only two occasions on which the recorded dialogue contained passages which did not seem sufficiently detailed for adequate evaluation of the subject's reasoning. These two sections of the dialogue transcripts were rated independently by a second judge and in both cases there was complete agreement between judges.

An attempt was made to secure reliability data on the response classification procedure. Although the pilot study interviews were tape-recorded it was not possible to assess the maturity of response to the stories solely from the tape recordings of the interviews. There was a considerable amount of non-verbal behaviour in the subjects' responses e.g. "That one" (pointing). In the pilot study, an attempt was made to specify the actual names of the characters the subjects indicated (in answer to questioning) but this appeared to confuse them and this technique was not used in the final study. A check was made on the
adequacy of the researcher's recording. Two independent judges observed the administration of the test to three subjects and their summaries of the dialogues were in close agreement with those of the experimenter. As a further check a random selection of interviews were tape recorded. The recordings and the transcripts were supplied to an independent judge who considered that the investigator's method of recording resulted in an adequate record of the children's responses.

The transcript for each of the 7 pairs of stories formed the basis for the classifications of a subject's judgement in terms of his ability or inability to take account of intention. All transcripts were scored for each subject and were then given to a second rater. Detailed instructions were supplied to the second rater. These included an outline of Piaget's (1932) subjective objective dichotomy of moral judgements and the relation between this dichotomy and the classification procedure. The second rater was asked to read each pair of stories, to read the subject's transcripts and to allocate, in accordance with the scoring criteria, a numerical score for each pair of stories.

(a) **Scoring Procedure**

Subjects were given a score of 2 each time they correctly chose the "naughtier" character in the paired stories, and gave a rational reason for the choice made. Subjects were given a score of 1 if they correctly chose the naughtier boy but failed to provide a rational reason for their choice. "Naughtier boy" referred to the character who was naughtier because of the intention behind his act rather than the degree of damage he caused.
Subjects were given a rating of zero if they chose the character whose actions caused the greater loss or damage. This method of scoring resulted in a possible range of 0 to 14 for any subject's "Intentionality Score". Inter-rater reliability for the intentionality score judgements was 0.98, indicating a high degree of consistency between the raters.

The 7 pairs of stories presented to 40 subjects provided 280 responses to be scored. The percentage of agreement reached between the researcher and the second rater on the scoring of the 280 story responses was 95.4%. A further check of inter-rater reliability was carried out by considering the percentage of agreement reached on the scoring of all the subjects' responses to each story pair. This comparison provided some useful information about the ability of each story pair to encourage easily classified, clear cut responses from the subjects. The percentage agreement between the two raters ranged from 100%, for story pair "G", down to 92.5% for story pair "E".

V ASSESSMENT OF ADDITIONAL FACTORS

The subjects were also asked which of the two characters in the paired stories should get the more severe punishment. The question asked of the child was, "Which boy/girl should get the biggest smack?" The word "biggest" rather than "bigger" was used to fit in with the use of the word "naughtiest" rather than "naughtier". In the pilot study a number of children had demonstrated their ability to choose the naughtier character on the basis of the character's intention, but chose the character causing the
greatest damage as deserving the more severe punishment. It was therefore felt that choice with regard to degree of punishment, would be an interesting variable to consider, and it seemed possible that a child's judgements regarding the allocation of punishment might reflect punishment patterns in the home. Socioeconomic status in terms of the fathers' occupation (see Table 1) was determined by using the index developed by Elley and Irving (1972). Primarily, this was done to investigate a possible relationship between the socioeconomic level of the family and the placement of the children in special classes. It was also considered that there might be a relationship between socioeconomic level and intentionality judgement. The link between low socioeconomic level and less rational, more frequently punitive child management patterns in the home has been documented by a number of writers (e.g. Sears, Macoby and Levin, 1957). Each subject's punishment choices were scored in the following way. A score of 1 was given each time a subject chose the "naughtier" character correctly (an intentionality judgement) and then chose the same character as deserving of the more severe punishment. The resulting score, the "Smack Score", had a possible range of 0 to 7 for each subject.

Data on school progress were collected on all children. For the special class group, the length of time the children had spent in special classes was also recorded. If the main factors under consideration, maturity along the intentionality dimension and degree of social maladjustment were factors influenced by the experience of being in a special class, then it seemed likely that those who had been in a special class for only a short time would achieve
scores closer to the scores obtained by the regular class children. In the case of the regular class subjects, data on school placement were also collected. A questionnaire was sent to the teacher of each of the regular class subjects. It was thought that teacher characteristics, such as the number of years of teaching experience of the child's teacher, the age of the teacher, or the number of children in the class might have been factors which influenced continued regular class placement. The questionnaire also asked about the regular class child's ability to cope with basic school work and with sports activities. The teacher was also asked to comment on the child's appearance. A copy of the questionnaire is included in Appendix C.

VI STATISTICAL ANALYSES

Two way (Tasks by Classes) analyses of variance (Winer, 1971) were carried out on all three measures of adjustment (Total Maladjustment, Withdrawal and Overt Maladjustment), on both measures of intentionality (Total Intentionality and Smack scores) and on the seven separate intentionality scale items. Where significant main effects were obtained, omega squared (Keppel, 1973), an estimate of strength of association independent of sample size was calculated.
CHAPTER IV
RESULTS AND DISCUSSION

I SOCIAL ADJUSTMENT AND CLASS PLACEMENT

According to Hypothesis I when the special class children were compared with the regular class children (matched on sex, age and intelligence) the special class group would achieve higher maladjustment scores on the Adaptive Behaviour Scale than the regular class group. Table 2 presents the results of an analysis of variance carried out on the Total Maladjustment scores for each group. The main effect for sex ($\bar{X}_b = 32.95, \bar{X}_g = 16.10$)\(^1\) and that for class ($\bar{X}_r = 15.45, \bar{X}_s = 33.60$) were significant. The interaction effect was non-significant although the difference between the special class boys ($\bar{X}_{sb} = 46.50$) and special class girls ($\bar{X}_{sg} = 20.70$) was greater than that between regular class boys ($\bar{X}_{rb} = 19.40$) and regular class girls ($\bar{X}_{rg} = 11.50$). The difference between the class groups ($p < .01$) provides strong support for Hypothesis I. These results indicate that in terms of the AAMD Adaptive Behaviour Scale (Leland et al, 1970) the special class children are significantly more maladjusted than children of equivalent age and intelligence in regular classes. In addition, in both groups boys are more maladjusted than the girls. The interclass difference seems consistent with the findings of Mullen and Itkin (1961) and Johnson and Kirk (1950), who found that often the initial reason for the referral of 1. For ease of presentation of means, lower case letters b,g,r and s are used to denote boys, girls, regular class and special class groups.
Table 2

Analysis of Variance of Total Maladjustment Scores

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>M.S.</th>
<th>F. Ratio</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sex (A)</td>
<td>1</td>
<td>2839.227</td>
<td>8.384</td>
<td>.006</td>
</tr>
<tr>
<td>Class(B)</td>
<td>1</td>
<td>3294.215</td>
<td>9.727</td>
<td>.004</td>
</tr>
<tr>
<td>AxB</td>
<td>1</td>
<td>801.039</td>
<td>2.365</td>
<td>.129</td>
</tr>
<tr>
<td>Within</td>
<td>36</td>
<td>338.653</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
children of low intelligence to special classes was their social maladjustment and rejection by regular class peers. The sex difference would appear to indicate that low IQ girls are better adjusted than low IQ boys (in terms of the AB scale) and that different criteria are used for determining the desirability of special class placement for girls and boys.

Alternatively the present results could be interpreted to suggest that it is actual placement in special classes that accounts for the difference in social adjustment. The possible increase in social maladjustment after special class placement could result from a number of factors. Special class children are usually removed from their local school district and "transplanted" into a totally new school setting. They typically spend most of their time segregated from the rest of the school and systematic integration programmes are rare (Dunn, 1968). The distance they travel to the special class necessitates late arrival in the mornings often by taxi rather than public transport and early departure in the afternoon - frequently before the rest of the school finishes. It seems likely that their opportunities for interacting with "normal" children and for observing and acquiring adequate social behaviour would be limited in such circumstances. The work of Hilliard (1949) indicates that children of low intelligence placed in special classes can become dependent on withdrawal from others as a way of coping with social situations. It is possible that present special class programmes encourage such withdrawal from social interaction.

On the basis of the findings it seems reasonable to regard special class children as being at a somewhat lower
level of social adjustment than regular class children of equivalent age and IQ. The primary focus of the present investigation is on the possible relationship between intentionality judgements and social adjustment in mildly retarded children. The results of the analyses of scores on the AAMD Adaptive Behaviour Scale indicate that the special and regular class groups are markedly different in terms of their social adjustment. Consequently an analysis of the intentionality judgements of these groups seemed appropriate.

II INTENTIONALITY AND CLASS PLACEMENT

In Hypothesis II it was predicted that the special class group would take account of intentionality less often than the regular class group and would thus achieve lower scores on the intentionality measures. Table 3 presents the results of an analysis of variance carried out on the Total Intentionality scores achieved by the two groups. The main effect for class ($\bar{X}_r = 2.80, \bar{X}_g = 3.30$) was significant ($p < .00001$) but neither the main effect for sex ($\bar{X}_b = 7.40, \bar{X}_g = 5.70$) nor the interaction were significant.

An estimate of the strength of the association between class placement and level of intentionality judgements was derived using Omega squared (Keppel, 1973). The result ($\hat{\omega}^2 = .479$) indicates that approximately 48% of the total variance of intentionality scores is accounted for by type of class placement. Consequently the significant main effect for class placement is a moderately strong experimental effect. Analyses of variance were also carried out on the scores for each of the seven separate intentionality scale
Table 3

Analysis of
Variance of Total Intentionality Scores

<table>
<thead>
<tr>
<th>Source</th>
<th>d.f.</th>
<th>M.S.</th>
<th>F. ratio</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sex (A)</td>
<td>1</td>
<td>28.902</td>
<td>2.588</td>
<td>0.113</td>
</tr>
<tr>
<td>Class(B)</td>
<td>1</td>
<td>422.500</td>
<td>37.836</td>
<td>0.000</td>
</tr>
<tr>
<td>AxB</td>
<td>1</td>
<td>2.500</td>
<td>0.224</td>
<td>0.644</td>
</tr>
<tr>
<td>Within</td>
<td>36</td>
<td>11.167</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
items and the results are tabulated in Appendix D. Only item "G" failed to yield a significant main effect for class and the scores achieved on item "G" were significantly and positively related to the Total Intentionality scores \( r = .627, N = 40, p < .01 \). The significant difference between the groups on the Total Intentionality scores provides support for Hypothesis II.

The results of an analysis of variance carried out on the Smack scores achieved by each group are presented in Table 4. The main effect for class \( (\bar{X}_r = 4.35, \bar{X}_s = 1.35) \) was significant but neither the main effect for sex \( (\bar{X}_g = 2.35, \bar{X}_b = 3.35) \) nor the interaction effect were significant. The results indicate that when presented with the 7 punishment problems, the regular class children more frequently took account of intention than did the special class children. Omega squared was used to examine the strength of the significant main effect for class placements \( (\hat{\omega}^2 = .405) \). This value indicates that approximately 40% of the total variance of Smack scores is accounted for by type of class placement—a moderately strong experimental effect. It should also be noted that Total Intentionality and Smack scores were closely related \( (r = 0.93, N = 40, p < .01) \).

The major objective of the present investigation was to ascertain whether or not a particular aspect of social decenation (ability to take account of intention when making a moral judgement) was less well developed in special class children than in regular class children of equivalent age and IQ. The results indicate that inability to take account of intention is a characteristic that clearly differentiates special class children from children of equivalent age and IQ who remain in regular classes. The two groups are strongly differentiated on the basis of
Table 4

Analysis of
Variance of Smack Scores

<table>
<thead>
<tr>
<th>Source</th>
<th>d.f.</th>
<th>M.S.</th>
<th>F. ratio</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sex (A)</td>
<td>1</td>
<td>10.000</td>
<td>3.141</td>
<td>0.081</td>
</tr>
<tr>
<td>Class(B)</td>
<td>1</td>
<td>90.000</td>
<td>28.272</td>
<td>0.000</td>
</tr>
<tr>
<td>AxB</td>
<td>1</td>
<td>2.500</td>
<td>0.785</td>
<td>0.615</td>
</tr>
<tr>
<td>Within</td>
<td>36</td>
<td>3.183</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
their social adjustment and on the basis of their ability to take account of intention; thus level of intentionality judgements does appear to be associated with degree of social adjustment in mildly retarded children. Unfortunately, it is not possible to determine whether or not the less adequate social adjustment of the special class group reflects their poorer intentionality judgements. Nevertheless it seems likely that there is an important relationship between these behavioural categories. Ability to take account of the intentions of others can be regarded as a facet of social decetration which appears to make a major contribution in providing a child with the ability to view realistically his relationships with others. This view is supported by a number of studies, e.g. Bobroff (1960). Such a skill clearly would allow a child to understand the rule system that numerous writers (e.g. Berne, 1964) argue is an important component of interpersonal relations. The ability to take another's point of view, of which ability to take account of intentions is a specific example, would appear to be crucial to the development of an adequate pattern of social adjustment (Harrower, 1934; Keasey, 1971). In everyday situations children who are immature in the ability to take account of intentions would be unable to see the need to respond differently to acts which for example were the result of malicious intent and those which were not. In school situations where considerable emphasis is now placed on group activity and social interaction, children who are immature in this way are likely to face difficulty in establishing adequate social relations with their peers. It is possible that once a child has encountered such rejection from his peers he may try to seek their attention and that
of his teacher by way of overt maladaptive behaviour or perhaps he might withdraw from social contact with them. It thus seems likely that the lower ability to take account of intention found in the group of special class children could have made a significant contribution to the social maladjustment difficulties they displayed and which presumably brought about their special class placement.

Alternatively it is possible that special class placement may deprive the child of the social interaction experiences which probably facilitate growth in ability to take account of intention. The importance of such social interaction in stimulating growth toward more mature levels of moral development, such as intentionality, has long been stressed (Harrower, 1934; Piaget, 1932). Indeed Piaget (1932) spoke specifically of the role of the school in exposing children to adequate social cooperation with this end in view (Piaget, 1932; p.372). Several aspects of special class education which militate against adequate experiences in social cooperation have been discussed in the previous section. In summary they can be characterised as practices which limit exposure to the social behaviour of "normal children" because of the degree of social segregation and isolation imposed on special class children. In the sense that special class placement might inhibit growth in the concept of intentionality (already shown to differentiate between special class children and children of equivalent IQ in regular classes), special class attendance could perhaps be described as reinforcing the mentally retarded child's deficiencies (Hilliard, 1949).

In summary the incorporation of the concept of adaptive behaviour within the AAMD definition of mental retardation
(Heber, 1961b) has reintensified the need to identify aspects of adaptive behaviour that can be described objectively and measured (Clausen, 1972). The present findings indicate that ability to take account of intention is related to adaptive behaviour. Moreover, the suggestion is strong that intentionality judgements are indeed an important component of adaptive behaviour.

III ADDITIONAL EXPLORATORY ANALYSES

(1) **Withdrawal and Overt Scores and Class Placement**

It was suspected that the group remaining in regular classes would include more withdrawn children. Table 5 presents the results of analysis of variance carried out on the Withdrawal scores achieved by the two groups. The main effect for sex and class and the interaction effect were nonsignificant. The difference between the mean scores (mean for the regular class group 6.15, mean for the special class group 7.75) shows the special class group to be slightly more withdrawn than the regular class group but not significantly so.

The results of an analysis of variance carried out on the Overt scores achieved by the two groups are presented in Table 6. The main effects for both sex and class were significant and the interaction effect was also significant. The means for the four groups are presented graphically in Figure 1. It is apparent that the difference between the sexes is due in large measure to the difference between the special class girls and the special class boys, ($\bar{X}_{sg} = 8.50$, $\bar{X}_{sb} = 28.40$). Although the regular class group was not more
Table 5

Analysis of

Variance of Withdrawal Scores

<table>
<thead>
<tr>
<th>Source</th>
<th>d.f.</th>
<th>M.S.</th>
<th>F. ratio</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sex (A)</td>
<td>1</td>
<td>78.402</td>
<td>2.133</td>
<td>0.149</td>
</tr>
<tr>
<td>Class(B)</td>
<td>1</td>
<td>25.602</td>
<td>0.697</td>
<td>0.586</td>
</tr>
<tr>
<td>AxB</td>
<td>1</td>
<td>0.898</td>
<td>0.024</td>
<td>0.871</td>
</tr>
<tr>
<td>Within</td>
<td>36</td>
<td>36.750</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 6

Analysis of variance of Overt Scores

<table>
<thead>
<tr>
<th>Source</th>
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<th>M.S.</th>
<th>F. ratio</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sex (A)</td>
<td>1</td>
<td>1155.625</td>
<td>8.499</td>
<td>0.006</td>
</tr>
<tr>
<td>Class(B)</td>
<td>1</td>
<td>1651.229</td>
<td>12.144</td>
<td>0.002</td>
</tr>
<tr>
<td>AxB</td>
<td>1</td>
<td>837.222</td>
<td>6.157</td>
<td>0.017</td>
</tr>
<tr>
<td>Within</td>
<td>36</td>
<td>135.969</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Figure 1

Scores on Overt Scale for Experimental Groups

Scores on Adaptive Behaviour

Overt Scale

Boys

Girls

Special Class

Regular Class

Class
withdrawn than the special class group, the regular class group was significantly less overt. The results could be interpreted to support the contention that children of low intelligence who do not draw undue attention to themselves by their behaviour have a greater chance of remaining in regular classes. At the same time although special class girls scored higher on all three measures of maladjustment than did regular class girls, the difference between special class girls and regular class boys is not as great. Different social expectations for girls and boys may result in regular class teachers tolerating a higher level of maladjustment in boys before their referral to special class is sought.

(2) Maladjustment and Intentionality

It was thought that intentionality scores would be negatively related to maladjustment scores (the lower the intentionality scores the higher the maladjustment scores). The correlation between scores on these two measures for the group of all 40 subjects was significant and negative but was not high \((N = 40, r = -0.198, p < 0.05)\). The AAMD scale appears to provide a useful measure of certain types of social maladjustment (those most easily observed by a teacher) but it does not appear to sample more subtle behaviours involved in social interaction. Such behaviours probably influence the subject's ability to cope in peer group activities (Brennan, 1962; Keasey, 1971), and it seems likely that a more substantial relationship between lack of ability to take account of intention and social maladjustment would be achieved where the maladjustment measure incorporated data on social
interaction behaviour.

(3) Time in Special Class

It was suspected that the longer children remained in special classes the more their scores on the three measures of maladjustment and the two measures of intentionality would diverge from the scores achieved by the regular class children. Specifically this would mean (in the light of the results already presented) that the longer the time spent in special classes the higher would be their Withdrawal and Overt Maladjustment scores, the higher would be their Total Maladjustment scores, and the lower would be their scores on the intentionality measures. Table 7 presents the product moment coefficients of correlation between time in special class and each of the scores mentioned. The results show that children who spent the longer time in special classes tended to obtain higher Total Maladjustment scores, higher Overt Maladjustment scores, higher Withdrawal scores, lower Total Intentionality scores and lower Smack scores. However, only the correlation between time in special class and Withdrawal scores was significant (p < .05). It is interesting to note that a significant positive correlation was also found between the age of the special class children and Withdrawal scores, \( r = 0.736, N = 20, p < .01 \). In contrast to the special class group, the correlation between age and Withdrawal scores for the regular class, although not significant, was negative. It is possible that the relationship found between time in special class and Withdrawal scores, and age and Withdrawal scores reflects the fact that children who are withdrawn were referred earlier for special class placement and therefore spent more of
Table 7

Product-moment Correlation Co-efficients
Between Time in Special Class and Measures of
Maladjustment and Intentionality for the Total
(N = 20) Special Class Group

<table>
<thead>
<tr>
<th>Measure</th>
<th>r</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Maladjustment Scores</td>
<td>0.200</td>
</tr>
<tr>
<td>Overt Maladjustment Scores</td>
<td>0.004</td>
</tr>
<tr>
<td>Withdrawal Maladjustment Scores</td>
<td>0.553*</td>
</tr>
<tr>
<td>Total Intentionality Scores</td>
<td>0.030</td>
</tr>
<tr>
<td>Smack Scores</td>
<td>-0.075</td>
</tr>
</tbody>
</table>

* p < .05
their school years in special classes. Clearly, this relationship should be investigated further.

(4) Socioeconomic Status

Although no specific hypothesis was formulated with regard to socioeconomic status, it was noted that this variable could influence Intentionality and Smack scores. Not surprisingly, the correlation between SES and Total Intentionality scores ($r = .078$, $N = 40$) and that between SES and Smack scores ($r = .189$, $N = 40$) for the total group of subjects, while positive were not significant. It should be noted that the sample was very restricted with respect to range of SES since, as McCandless (1964) and others have noted, the mildly retarded tend to come from predominantly lower socioeconomic homes.

(5) Data on Teacher and Pupil Characteristics

It was suspected that teacher characteristics could have a bearing on the retention of children within the 50-75 IQ range in the regular class. Therefore an attempt was made to gather information on those characteristics that were considered likely to influence the regular class teacher's ability to cope with such children.

The teachers of each of the regular class children involved in the study were asked to complete a questionnaire about their age, length of service, etc. (See Appendix C). Of interest was the number of young teachers with infant teaching experience who were among the 20 teachers of the regular class group. Of the 18 teachers completing the questionnaire ten were under 25 years of age and had less than five years teaching experience, with five of them
having from one to four years experience in teaching infant children. Of the remaining eight teachers, seven had from three to nine years experience of teaching infants. While infant teaching experience should help teachers to cope with children of low intelligence in the regular classroom, it is not possible to say whether such experience was a determining factor in the children's continued attendance in regular classrooms. Unfortunately it was not possible to obtain data on the teachers of the regular classes attended by the special class group prior to their special class admission.
CHAPTER V

SUMMARY AND CONCLUSIONS

The present investigation was concerned with identifying characteristics which differentiated special class children from those of equivalent IQ who remain in regular classes. The AAMD definition of mental retardation (Heber, 1961b), now almost universally accepted, has reaffirmed the importance of social maladjustment as an integral behavioural criterion of mental retardation. At the same time social adjustment as a component of the AAMD definition has been criticised because of its vagueness and lack of objectivity (Clausen, 1972).

It is frequently held that social maladjustment and low intelligence are inevitably linked but this relationship has not received empirical support either in studies prior to 1966 (Gardner 1966) or in subsequent studies. In New Zealand less than 30% of children within the IQ range 50-75 attend special classes, and the results of a small pilot study, indicated that factors other than IQ are taken into account when placement in a special class is considered. Moreover some local research (Möhe, 1973) indicates that level of social adjustment is one such additional factor which differentiates those placed in special classes from those who remain in the regular classes.

It thus seemed likely that special class children would be more socially maladjusted than children of equivalent age and IQ in regular classes. The present investigation was concerned with the possibility that differential intentionality judgements on the part of the special class and regular class
children of equivalent age and IQ might be closely related to their levels of social adaptation.

The likelihood that inability to take account of another's intentions when making a moral judgement would be associated with inadequate social adjustment and might therefore also differentiate the two groups was suggested by a number of studies. Piaget (1932) viewed the development toward more mature levels of morality (of which the increasing ability to take account of intention is one aspect) as closely related to the acquisition of underlying social rules. Bobroff (1960) noted that although mentally retarded children were some two years behind normal children in growth of social decenteration, the pattern of development was similar for both. Brennan (1962) found a relationship between moral maturity and an aspect of social adaptation while Preston (1964) found a significant relationship between maturity of moral judgement and school adjustment. Keasey (1971) found maturity of moral judgement positively related to extent of social interaction. Of particular interest was the suggestion by Breznitz and Kugelmass (1967) that the use of the intentionality principle could enable children to cope more efficiently with their social environment. A study by King (1969) provided specific support for this view.

Although two studies did investigate the relationship between ability to take account of intention and social adjustment among retarded children (Brennan, 1962; Preston, 1964), no entirely adequate study was found. On the basis of these studies and those undertaken among children of average intelligence, it was assumed that a close relationship between ability to take account of intention and social
adjustment would be found among children within the 50-75 IQ range.

Twenty children (10 boys and 10 girls) attending primary special classes and 20 children of equivalent sex, age and IQ were assessed using the AAMD Scale as a check on the differential social adjustment of the two groups. Subsequently two measures of intentionality judgements, Total Intentionality (a scale based on judgement of the naughtier character) and Smack score (based on responses to punishment problems), were administered to the two groups.

Two major findings emerged from the present investigation. Firstly, the special class group achieved significantly higher maladjustment scores on the AB scale than did the regular class group. Social adjustment level thus clearly differentiated between special class children and those of equivalent IQ in regular classes. This result seems consistent with the findings of Mullen and Itkin (1961) and Johnson and Kirk (1950) who found that often the initial reason for referral of children of low intelligence to special classes was their social maladjustment and rejection by regular class peers. Secondly, the special class group achieved significantly lower scores on both measures of intentionality (Total Intentionality and Smack scores) than did the regular class group. These results suggested that ability to take account of the intentions of others is related to adequacy of social adjustment. It is important to note however that further research would be needed to determine the nature of the relationship between these variables. It is tempting to conclude that special class children were placed in special classes because they were socially maladjusted prior to admission. Moreover it is equally
tempting to speculate that the special class children's Intentionality judgements were less adequate than those of/ equivalent age and IQ prior to their special class admission and that their less mature Intentionality judgements were an important underlying determinant of their placement in special classes. Unfortunately it is not possible to determine whether or not this is so. At the same time it is highly likely special class placement itself could have affected the results achieved on both measures. Certainly the present results provided evidence to suggest that the longer children stayed in special classes the more withdrawn they became. The importance of social interaction on the development of intentionality has been stressed by a number of writers (e.g., Bobroff, 1960; Harrower, 1934; Piaget, 1932). It seems likely that the limited social interaction often experienced by special class children (Dunn, 1968; Hilliard, 1949), partly as a result of their placement in schools outside their local community, could result in insufficient social interaction for the continued growth of this particular social decentration skill. Children of equivalent intelligence in regular classes, however are likely to continue to develop this ability since their social interactions are not restricted. Although the results of the present investigation do not show that special class placement brings about a higher level of maladjustment, they are consistent with the possibility that such placement can hinder subsequent social development. It seems unnecessary to stress the undesirability of such an outcome. Clearly the possible adverse effect of special class placement on the social development of mildly retarded children warrants more detailed investigation.
LIMITATIONS OF THE PRESENT STUDY

From the literature it is apparent that the measures which have been used to assess social adjustment among children of low intelligence are far from adequate. Although use of the AB scale appears to avoid some of the difficulties encountered by other researchers the measure still had considerable limitations. The scale incorporates information about maladjusted behaviour which is easily observable by the teacher and thus it does not appear to provide information about more subtle behaviour which is probably displayed in peer group activity. Criticisms that have been levelled at adjustment scales completed by teachers (e.g. Itkin, 1960) are thus probably applicable to some extent to the AB scale. Itkin noted the likelihood of teachers viewing the special class child against the behavioural norms of the special class rather than against more normal and reasonable behaviours. It is precisely this different frame of reference which creates difficulties in comparison studies. In spite of this possibility that special class teachers may overstate their children's capacity for adequate social adjustment the results on the measure used showed the special class group to be significantly more maladjusted than the regular class group.

Criticisms levelled at previous studies of intentionality by Magowan and Lee (1970) also seem partially applicable to the present study. The main problem in the method of assessment of intentionality which was used, was the necessity to assume that all the subjects understood the stories well enough to make a rational choice of the "naughtier" character. The modification of the stories after the pilot
study should have helped to overcome this to some extent and certainly no subject failed to provide a reason for his choice. However, it seems likely that some children in the final study did not completely understand the stories. If this type of measure is to be used at all however it is difficult to see what precautions other than those undertaken in the present study, could be used to overcome the difficulty. A general criticism that can be made of the present study is that the small numbers involved limit the degree to which the findings can be accepted as typical of special class and regular class children (IQ range 50-75). An increase in the number of subjects however would probably necessitate the involvement of additional researchers to cope with data collection.

II FUTURE RESEARCH NEEDS

Of particular interest would be a study comparing special class children with children of equivalent intelligence who have remained in the regular class without ever having been referred for psychological assessment. In the present study the regular class group had been referred for psychological assessment. Thus they can not be regarded as typical of children of low intelligence who have coped successfully and continue to cope successfully in regular classes. Although they were subsequently able to continue in regular classes, it seems significant that they had presented problems which resulted in their referral for psychological assessment. The group of children within the 50-75 IQ range who continue in regular classes without
ever being referred for assessment, are presumably children whose problems have never appeared to their teachers to be different from those of "ordinary" children. It seems likely then that this latter group (comprising about 40% of children within the special class IQ range), would achieve even higher intentionality scores than the regular class group involved in the present study. Therefore the differences found between regular and special class children's scores on intentionality may well point to intentionality as being an even greater differentiating characteristic than the present results indicate. The significant relationship between Withdrawal scores and time spent in special class together with the possibility that development of intentionality could be affected by special class placement suggest that a study of the effect of such placement on adaptive behaviour and intentionality judgements would be very worthwhile.

The present research has raised the question as to whether the low scores achieved on the AB Scale and the intentionality measures were a cause of placement in the special classes or whether they were brought about by special class placement. There is a clear need for research to examine this question. One strategy would be to make use of the measures of intentionality used in the present study together with measures of social adjustment. A minimum of three different groups (matched on IQ, sex and age) would be required, viz., a group of special class children, a group of children selected for special class but awaiting placement and a group of children who have remained in the regular class without ever having been referred for psychological assessment. A survey involving group
screening followed by individual testing would be required to identify this latter group. The group awaiting placement would need to be assessed before placement and after some months in special class. The results of such an investigation would make it possible to assess the extent to which special class placement affected previous levels of social adjustment, its effect on growth of maturity in intentionality and the extent to which maturity of intentionality differentiates children who continue in regular classes from those referred for assessment and subsequently admitted to special classes.

There is evidence to suggest that ability to take account of intention can be increased by training, (Ahr, 1971; Crowley, 1968; Dworkin, 1968; Glassco, Milgram and Youniss 1970 and Jenson and Larm, 1970). It seems reasonable to suggest as do Breznitz and Kugelmass (1967), Edmondson, De Jung and Leland (1965) and Edmondson, Leland and De Jung (1967), that increased ability to socially decentre in general, or to take account of intention in particular could result in improved social adjustment behaviour although none provide evidence that such increased ability results in more acceptable social behaviour. A further interesting extension of the present research would be a study involving training in ability to take account of intention together with a pre-training and post-training assessment of social behaviour in mildly retarded children. Such a study would need to ensure that adequate assessment of social adjustment was carried out. The measures used should combine assessment of peer group acceptance (as rated by peers), time interval play behaviour sampling by an independent rater, and teacher rating of maladaptive behaviour. There
are difficulties in establishing the validity of the first type of measure but the possibility of deriving knowledge about subtle interpersonal behaviours is of interest. The work of Baldwin (1958), Goodman et al (1972), Goodnick (1957) and Johnson (1950) provides information about such assessment. The time sampling of play could be a useful parallel measure in such a study if, unlike the Capobianco and Cole (1960) study, it involved an initial description and a subsequent classification of actual behaviours. Chess and Korn (1970) defined categories of temperament based on modes of behaving and these could be used to evaluate behaviour recorded by a time sampling method. Although such an assessment procedure may seem unnecessarily complex, the various assessments of adjustment made would enable a more adequate evaluation of the effect of intentionality training.
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STORY PAIR A

(1) **Accident**

John was outside playing. Mother called out, "Come and get your dinner." John went inside. John's mother had left all the cups for dinner on a tray on the table by the door. When John came in he opened the door and knocked all the cups on to the floor. John had knocked all the cups on to the floor and 6 cups were broken.

(2) **Intention**

"Goodbye Bill, don't eat the biscuits while I'm away." Bill went into the kitchen. There were no biscuits on the plate. Bill reached up high to get the biscuit tin. Bill got the biscuit tin but he knocked down one cup and it broke.

STORY PAIR B

(1) **Intention**

At playtime Tony was playing football with all the other children, but he didn't get a kick at the ball so he was sad. When the bell went for all the children to go into school all the other children ran towards their classrooms but Tony waited and kicked the ball hard. It went over the fence. The teacher had to go and ask for the ball.
(2) Accident
At playtime David was playing football. He kicked the ball very hard. The ball went up in the air and the wind blew it over the fence. The ball broke a window in the house.

STORY PAIR C

(1) Accident
Joanne came home early after school and found that her mother wasn't home. Joanne thought she would help her mother get tea ready so she got all the plates out and put them on the table. While she was putting the last plate on the table she slipped and pulled the table cloth and all the plates onto the floor. What a mess! Twelve plates were broken.

(2) Intention
Alice came home after school and found that her mother was not home. Alice thought she would steal some icecream out of the refrigerator and eat it before her mother got home. She got a little dish out of the cupboard to put the icecream in. Alice started walking to the refrigerator to steal the icecream but the little dish slipped out of her hand and broke on the floor.

STORY PAIR D

(1) Intention
Paul's father was painting the kitchen table. "Can I help?" said Paul. "No", said Paul's father, "its too hard for a small boy." Paul's father stopped painting to go and have a cup of tea. When Paul's father had gone, Paul put his
fingers in the paint. And then Paul made little paint marks on the kitchen floor with the paint on his fingers.

(2) Accident

Mark's father was painting the fence. "Can I help?" said Mark. "Yes", said Father. Mark was so busy painting that he didn't see the big paint tin on the ground. Mark tripped over the big tin of paint. All the paint in the big tin went all over the ground.

STORY PAIR E

(1) Accident

Joe and his father went to town in the car. Joe's father parked the car and they got out. Joe's father said "Lock the door please," but Joe didn't hear so he didn't lock the door. While they were away in the shop a man came along, opened the car door and stole $10 out of the purse in the car.

(2) Intention

Bob was playing cricket on the footpath. His father called out "It's teatime, come on in and bring your cricket bat in." Bob wanted to play cricket after tea so he left the cricket bat by the front gate. While Bob was having tea another boy came along and stole the old bat.

STORY PAIR F

(1) Intention

The teacher said "Painting time now, time to paint a big picture with your fingers." Anne didn't like painting with her fingers much so she just played with her paint. Anne got the paint and dripped some onto the floor.
(2) Accident

The teacher asked "Who will help clean up the paints?"
Judy said "I will help clean up the paints Teacher."
Judy is trying to clean up all the paints to help Teacher.
She is carrying 6 jars to the sink to wash them. Judy
couldn't hold them all and the big red paint jar dropped on
the floor and paint went all over everything.

STORY PAIR G

(1) Accident

Wendy was playing with Jill. They were looking at
the photographs in the photo book. They had two big
drinks to have when they got thirsty. Jill was having a
look at a photo when she bumped the glasses of drink. The
orange went on the book and made a mess of 8 photos.

(2) Intention

Nola was looking at the family photographs in the photo
album. All the photographs had her brother John in them.
Nola did not like seeing all the photos of her brother.
Nola was very angry that all the photos had her brother in
them so she got a red crayon and scribbled over one photo
in the book.
Figure 2

Illustrations for Story Pair D
A Intention
B Accident
APPENDIX B

RECORDED TRANSCRIPTS
OF THE INTERVIEWS OF TWO SUBJECTS

Standard Questions
Question 1 (Q.1) "Which boy/girl is the naughtiest?"
Question 2 (Q.2) "Why?"
Question 3 (Q.3) "Which boy/girl should get the biggest smack?"

Additional questions are included in full in the following transcripts.

SUBJECT I

Story Pair A
Q.1 "Him" (John).
Q.2 "Because he broke a cup, thats only one."
Q.3 "Him" (John).

Story Pair B
Q.1 "That one," (David).
Q.2 "Because he broke a window."
"Why isn't Tony the naughtiest?" "Because he didn't smash a window but he was naughty as well."
Q.3 "David."
"Why?" "Because he broke the window."

Story Pair C
Q.1 "Both."
"Which was the very naughtiest?" "Her, Joanne."
Q.2 "Because she dropped 12 plates."
"Why isn't Alice the naughtiest?" "Because she only dropped one plate."
Q.3 "Joanne."

**Story Pair D**

Q.1 (He pointed at Mark).
Q.2 "Because he spilt all the paint."
"Why isn't Paul the naughtiest?" "Because he only spilt a wee bit."
Q.3 (He pointed at Mark).
"Why?" "Because he spilt the paint."

**Story Pair E**

Q.1 "Joe."
Q.2 "He left the door open and a man took $10."
"Why isn't Bob the naughtiest?" "Because he only left a bat at the gate."
Q.3 "The boy that was in the car," (Joe).
"Why?" "Because he left the door unlocked."

**Story Pair F**

Q.1 (He pointed at Judy).
Q.2 "Because she dropped a big jar of paint."
"Why isn't Anne the naughtiest?" "Because she only spilt a wee bit."
Q.3 "Judy."

**Story Pair G**

Q.1 (He pointed at Jill).
Q.2 "Because she knocked the drinks over and spilt it on the book."
"Why isn't Nola the naughtiest?"  "Because she only did a wee scribble."

Q.3 (He pointed at Jill).

SUBJECT II

Story Pair A

Q.1 "John."

Q.2 "Because he broke all the cups."

"Why isn't Bill the naughtiest?"  "Some cups broke but there is still some left."

Q.3 "John."

Story Pair B

Q.1 "This boy," (Tony).

Q.2 "Because when all the other children went inside he stayed and kicked the ball."

"Why isn't David the naughtiest?"  "Because he kicked the ball but the wind blew it over the fence."

Q.3 "Tony."

Story Pair C

Q.1 "Her," (Alice).

Q.2 "Because she was going to steal some icecream out of the cupboard and she broke a plate."

"Why isn't Joanne the naughtiest?"  "She was trying to put the plates on the table and she slipped."

Q.3 "Alice."

Story Pair D

Q.1 "Him," (Paul).

Q.2 "Because he was making the paint marks on the floor."
"Why isn't Mark the naughtiest?" "Because he never saw the paint tin there."
Q.3 "Him, Paul."

Story Pair E
Q.1 "He," (Joe).
Q.2 "Because he left the door open and when they went into the shop a man came along and stole $10."
"Why isn't Bob the naughtiest?" "Because he left the bat outside the gate because he was going to play cricket after tea."
Q.3 "Him," (Joe).

Story Pair F
Q.1 "The girl there," (Anne).
Q.2 "Because she doesn't like painting so she played and made spot paints on the floor.
"Why isn't Judy the naughtiest?" "Because she couldn't hold all the jars."
Q.3 "Anne."

Story Pair G
Q.1 "Her," (Nola).
Q.2 "Because she didn't like all the pictures of her brother so she scribbled the picture."
"Why isn't Jill the naughtiest?" "Because she was looking at the photo and only bumped the drink."
Q.3 "Nola."
APPENDIX C

QUESTIONNAIRE SENT TO THE TWENTY TEACHERS
OF THE REGULAR CLASS CHILDREN

To the class teacher of ..........................................................
1. Present Std. .............. 2. No. of children in class ....
5. Length of service .......
6. Qualifications including number of units where degree incomplete .................................................................
7. Years of experience in teaching primer classes ............
8. Would you consider the child under consideration to be
good looking or pretty? ..................................................
9. Is there any comment that you would care to make about
the child's appearance? ..................................................

.................................................................
10. Is it the case that this child can work independently
on some basic school subjects or in a group where his
peers are at a similar level? ..........................................

.................................................................
11. Is this child good at group sport or playtime activity
to a degree that he could be considered a 'leader'
rather than a 'follower'? ..........................................

.................................................................

Thank you for your co-operation in answering the above
questions.

1. A covering letter sent with the questionnaire asked
for the teacher's co-operation and explained that all
information volunteered would be treated in the
strictest confidence.
APPENDIX D

ANALYSES OF VARIANCE FOR
SEPARATE INTENTIONALITY SCALE ITEMS
Analysis of Variance of Scores
on Item 1 Story Pair A

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