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MORAL JUDGEMENT IN LEARNING DISABLED CHILDREN.

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A dissertation submitted to the Faculty of Arts

of the University of the Witwatersrand for the

degree of Master of Arts.

December, 1976.

I hereby declare that this dissertation is my own work and that it has not been submitted for a Master's Degree to any other university.

F. D. Fincham

ACKNOWLEDGMENTS

I would like to express my gratitude to:

Professor J. W. Mann, my supervisor, for his guidance and er tical evaluation of my work.

Mrs. F. Muller, headmistress of Norwood Remedial School, Mrs. J. Fain, headmistress of Crossroads School, and Mr. B. Myers, headmaster of King David Pr'mary School, for allowing me access to pupils at their schools.

The children who participate in the study.

Mr. C. Chemmell for his assistance with the statistics.

Mr. A. Traill and Miss. C. Penn for their advice regarding the linguistic simplification of the moral judgement stories.

Mrs. E. Taljard who drew the illustrations for the moral judgement stories.

Geoffrey Ingham who assisted me with the proofreading.

Julian Barling for his constant encouragement and his wife Janice, for typing this dissertation.

Finally, all those people, too numerous to mention, who provided moral support during the course of this work.

Erratum
Read affect for effect on pp.19,21,46,61,90.

ABSTRACT

The general aim of the present study is to evaluate the moral judgement ability of underachieving children with learning disabilities by comparing them to a group of normal achievers. More specifically, both a theoretical and empirical issue are investigated. At a theoretical level the cognitive developmental approach to moral development is assessed while empirical questions involve the moral judgement, cognitive and social skills of learning disabled children as compared to normal achievers. Six moral dilemmas served as measures of moral judgement, while three Piagetian conservation tasks and a cognitive role taking test were used to assess cognitive and social skills respectively. These tasks were individually administered to fifty-six 8- and 9-year-old boys comprising learning disabled (N = 28) and normal achieving (N = 28) samples. These groups were approximately equated on the variables of age, IQ and socio-economic status. Results indicated that there were no significant differences in the performance of the two groups on any of the experimental tasks. In respect to the theoretical issue investigated these findings are interpreted as supporting the cognitive developmental claim regarding the necessity of cognitive and social skills for adequate moral judgement. The emprical implications of the present results suggest that impairments manifest by the learning disabled may not be generalised, but specific to certain areas of functioning. Finally, a number of suggestions are made with regard to the diagnosis and remediation of learning disabilities as well as for future research both in the field of learning disabilities and moral judgement.

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CHAPTER 1

Introduction

The present study represents a tension between the two polarities of child psychology, namely, the reality of the child, demanding concrete description, and developmental theory, with its need for conceptual analysis of abstract psychological processes. Theoretically, the aim of this study is to evaluate the cognitive developmental approach to moral development while at a more concrete, empirical level it investigates the moral judgement ability of learning disabled (LD) children as compared to normal achievers.

The inclusion of both a theoretical and empirical issue reflects the reciprocal relationship of theory and research and emphasises the value of researching deviant populations to validate psychological theory. Although developmental theory is readily utilised to explain the psychological functioning of individuals deviating from the norm it is often not recognised that investigation of these individuals may aid in testing such theory. Learning disabled children may be particularly important in this respect as they manifest a variety of symptoms which may impa psychological functions. It is thus unfortunate that studies utilising LD children have not been used as a means of evaluating developmental theory but have almost exclusively focused on the etiology, symptomatology and remediation of this syndrome.

Investigation of the LD child's moral judgement may provide a valuable source of information for theories of moral judgement development, a consideration which is emphasised by the fact that published research on moral judgement has been largely confined to the study of 'normal' samples. In addition basic descriptive data would be provided in an area which has been

totally neglected in research on learning disabilities. These two facets of the present study are considered separately, and in more detail, below.

1.1 Theoretical Issues

No attempt is made to evaluate the relative efficacy of different views of moral development in this study, as the cognitive developmental approach alone deals with moral judgement. Furthermore, the principle exponents of this approach, Piaget (1932) and Kohlberg (1969, 1971) agree on the integrities necessary for moral judgement development. More specifically, moral judgement is held to depend on cognitive and social development, the latter being necessary but not sufficient conditions for the former. In view of this basic agreement the primary focus of the present study is not to investigate the value of different cognitive developmental theories. Rather, working within a cognitive developmental framework, it attempts to evaluate hypotheses generic to this approach by investigating moral judgement in a population characterised by a syndrome which may impair cognitive processes and/or social skills.

Considering this general argument in greater detail it translates into the following form in the context of the present investigation. While Piaget (1932) views social development in terms of increasing participation in the peer group, Kohlberg (1969) emphasises general role taking opportunities for moral growth. Both these processes however involve an awareness of reciprocal relationships, the sine qua non of operational thought. Initially, the child is egocentric, but later decenters recognising that relationships, whether physical or social, can be seen from more than one perspective. It is therefore likely that a child unable to decenter will not consider the reciprocal, interpersonal factors in moral conflicts and hence exhibit more

abilities are impaired

5. Moral judgement and role taking skills are adequate but conservation ability is impaired.

6. Moral judgement and the ability to conserve are adequate but role taking skills are impaired.

The first two possibilities are obviously consistent with cognitive developmental theory, as is the third, for social and cognitive skills are posited to be necessary but insufficient conditions for moral growth. The fourth outcome would be the most debilitating as it questions the necessity of both cognitive and social skills for moral growth. Similarly, the last two possibilities are inconsistent with this approach even though they would only question the relative importance of the two skills under consideration. Although both Piaget and Kohlberg emphasise cognitive development and social interaction for moral growth, Piaget tends to weight the latter more heavily, while Kohlberg favours the former. In a sense therefore these last two possibilities could arbitrate between Piaget's and Kohlberg's theories. However, this would constitute a pseudo-test as the emphasis given by each theorist to these respective factors is relative to the other, rather than absolute. Moreover, such arbitration is unnecessary as Kohlberg's more developed theory is acknowledged as the successor to Piaget's pioneering effort (Lickona, 1976 b).

1.3 Aims

The general aim of the present study is the assess the cognitive developmental approach to moral development by investigating moral judgement in a deviant population. A LD sample was chosen in the present study in view of the postulated link between learning disabilities and delinquency

(Poremba, 1967, 1975) as the latter has also been associated with impaired moral judgement (Fodor, 1972; Hickey, 1972; Kohlberg, 1964). It is thus possible that LD children are unable to adequately reason about moral issues. If this is indeed the case one might expect, according to cognitive developmental theory, to find cognitive and social skills impaired in this group. However, if adequate moral reasoning were found then by defintion both of these skills must be intact. Accordingly, the present study has three aims:

1. To investigate the cognitive ability of LD children as compared to normal achievers.
2. To investigate the social skills of LD children as compared to normal achievers.
3. To investigate moral judgement in LD children as compared to normal achievers.

1.4 Hypotheses

In the absence of research relating to the second and third aims, and the ill-defined nature of the literature pertaining to the first, one may question the validity of stating directional hypotheses. The dearth of formal theory in the field of learning disabilities further substantiates this viewpoint for, as Kerlinger (1973, p.20) points out, hypotheses are deduced from theories. It would therefore seem more appropriate to use the weaker form of questions in the present study. In any event, as the above stated aims easily translate into questions specific to the experimental task they approximate the major requirements of hypotheses in that they are amenable to empirical testing. The questions are as follows:

1. Do LD children differ from normal achievers in cognitive ability as

measured by liquid conservation tasks?

2. Do LD children differ from normal achievers in social ability as measured by a cognitive role taking task?

3. Do LD children differ from normal achievers on measures of moral judgement?

In addition to serving as a test of cognitive developmental theory, the first two questions will delineate where, if any, a breakdown of moral judgement occurs in the LD population. This would in turn suggest possible areas for intervention, a serious problem in view of the postulated link between learning disabilities and delinquency. The practicability of such intervention is emphasised by the growing tendency to construct educational programmes on the basis of research in moral development (Blatt & Kohlberg, 1976; Kohlberg, 1975; Sprinthall, 1971; Wasserman, 1976).

1.5 Definitions

In order to avoid the terminological confusion characteristic of the field of learning disabilities, the meaning and referents of several terms generic to this study are detailed below.

Moral judgement is defined as the capacity to make decisions (judgements) in terms of a standard and to justify maintaining the standard to oneself and to others. Furthermore, it is assumed in the present study that moral judgement can be analysed from verbal responses.

A learning disability is variously defined in the literature although a common feature emerging from several definitions (Clements, 1966; Hallahan & Kauffman, 1976; Murray, 1969; Myklebust, 1968; Wepman, Cruickshank, Deutsch, Morency & Strother, 1975) is a deficiency in

learning and academic achievement despite adequate intelligence, vision, hearing, motor capacity and emotional adjustment. In the absence of a universal definition and in view of the difficulties encountered in formally defining this term, the following definition is used in the present study. A learning disabled child is one who has been diagnosed as such by a multi-disciplinary team and is as a result, in full-time attendance at a remedial school.

Conservation refers to the ability to recognise that a quantity remains invariant despite transformations in its appearance.

Role taking is the capacity to take another person's perspective and thus requires an understanding of the self and others as subjects. It is the ability to react to others as like to the self and to react to the self from another's vantage point.

1.6 Plan of the Study

Chapters 2, 3 and 4 review pertinent literature in the fields of moral judgement and learning disabilities while chapters 5, 6 and 7 concern the design and execution of the present study as well as a discussion of the results.

In chapter 2 the cognitive developmental approach to moral development is outlined together with the theories of Piaget and Kohlberg, its major proponents. The purpose of this chapter is to place the present study in its theoretical context.

Chapter 3 covers relevant topics in the field of learning disabilities. In this chapter a discussion of conceptual issues supplies the framework for a review of the symptoms associated with learning disabilities specifically those relating to cognitive and social skills. The final section

comprises a more direct discussion of learning disabilities and moral judgement. Essentially, this chapter represents an attempt to justify the use of LD children in the present investigation.

In chapter 4 empirical findings relating cognitive processes and social skills to moral judgement are reviewed. In addition attempts to investigate moral judgement in exceptional populations are reported. This chapter can thus be seen as a partial integration of the material presented in the preceding two chapters.

Chapter 5 outlines the general plan of the present study. The overall design, method of selecting subjects, test instruments, as well as the general procedure followed in executing the experiment, are described.

Chapter 6 details the exact materials used, administration procedures and results obtained in each of the areas investigated namely, conservation, cognitive role taking and moral judgement.

The final chapter considers the results in relation to the theoretical and empirical issues investigated in the present study. The implications of these findings for the field of learning disabilities and future research are also discussed together with the limitations of the present study.

CHAPTER 2

The Cognitive Developmental Approach to Moral Development

The precedent for a psychological investigation of moral development is well established as the social sciences were for several generations termed 'the moral sciences'. Although several great psychologists of the early twentieth century stressed the study of morality* there was little interest in this topic following the Character Education Inquiry of Hartshorne and his collaborators (1928, 1929 & 1930). After an extensive study involving 11,000 subjects and several tests of moral traits, these investigators concluded that morality was not a very useful psychological construct and consequently work in this area acquired the off-beat aura that ESP research has today.

Recently, however there has been an upsurge of interest in moral development leading to re-analysis of the original Hartshorne et al., data (Burton, 1963) and the arguments substantiating their conclusion (Kay, 1968; Kohlberg, 1964). Reasons for this volteface are readily apparent and include; recent historical events (e.g., nazism) which emphasised the distinction between moral maturity and adjustment to social norms; the popularisation of Piaget who stressed the different ways people perceive their physical and social relations and hence incorporated a study of moral judgement into his work; the realisation that moral development

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* (For example, Freud (1930) stated that "the sense of guilt is the most important problem in the evolution of culture" while McDougall (1908) stressed that "the fundamental problem of social psychology is the moralisation of the individual by society".)

could not be explained by the laws governing human behaviour discovered via investigation of learning, perception etc.; finally, the emergence of methodological sophistication since the controlled study of moral development encounters severe practical and ethical limitations.

Contributions to this rejuvenated field stem from several diverse sources which can be roughly distinguished according to Langer's (1969) taxonomy of psychoanalytic, mechanical mirror and organic lamp theor' Such diversity is hardly surprising as moral development can be conceived in several ways. Psychoanalysts for example, identify morality with the superego and hence concentrate on the internalisation of standards set by authority figures. As the superego is claimed to be a well-integrated function morality is seen as an across-the-board phenomenon changing little after the incorporation of parental values. In contrast social learning theorists view moral behaviour as highly flexible, varying as a function of modelling and quantitative changes in strength of rewards and punishments . Eysenck (1976) typifies this approach in defining conscience, which he equates with morality, as a 'conditioned reflex' to a certain class of stimuli the person wishes to avoid. Both these approaches see moral development in terms of conformity to an external standard and are thus committed to moral relativity. In contrast the cognitive developmental approach which emphasises judgemental processes, claims a culture-free approach to the study of moral development. As this approach dominates research in moral development (Rest, 1974a; Taylor, 1974) and constitutes the theoretical framework of the present study it will be considered in greater detail.

2.1 Cognitive Developmental Theory

Although the cognitive developmental approach has only recently been fully developed in the moral domain (Kohlberg 1969, 1971), it represents a set of assumptions and research strategies reflected in some of the earliest theories of social and cognitive development (e.g., Baldwin, 1906; McDougall, 1908). These features can be inferred from the term 'cognitive developmental'. 'Cognitive' implies that a central role is accorded to mental structures while the word 'developmental' emphasises the interest shown in structural transformations. Judgements thus constitute the focus of this approach in the moral sphere, as opposed to moral affect or moral behaviour emphasised by psychoanalysts and social learning theorists respectively.

Interest in cognitive processes which entails study of the general shape or organisation of responses rather than their rate or intensity, underlies the most striking characteristic of cognitive developmental theory, that of a culture-free approach. This claim rests on the crucial distinction between moral content (what a person believes) and moral form (how a person reasons about his beliefs). While individuals may differ in the content of their moral arguments, the reasons given for their respective viewpoints may be similar. For example, a capitalist and a socialist may violently disagree with each other yet share the same moral principle (e.g., concern for the welfare of society). Structure, or moral form is thus a higher-order feature of moral judgement than content, transcending cultural boundaries. It is concern for this cognitive structure which characterises the present theory and forms the basis of its culture-free approach.

The central role of cognitive processes also defines the developmental dimension of this approach. Whereas content-based measures of moral

thought (e.g., moral knowledge, resistance to temptation) do not produce clear age-related changes, structural dimensions appear to do so (Kohlberg, 1964; Turiel, 1974). Yet if content is not a developmental variable how does one account for the obvious difference between child and adult moral functioning? According to cognitive developmental theory the answer lies in a structural approach to moral development, one which is however, not without difficulty.

How does one differentiate content from structure? To illustrate this difficulty consider the concept of justice, a sine qua non of Kohlberg's (1969, 1971) theory. The application of justice presupposes that treatment is based on relevant considerations. To determine these however, depends on an evaluative premise which is not intrinsic to the formal principles of the justice concept. Do such evaluative criteria constitute content or form in moral reasoning? A similar difficulty exists in distinguishing response patterns of internal mental structures from verbal learning. Hence Mischel and Mischel (1976) suggest that structural changes may merely mirror different verbal patterns in justifying moral judgement. It seems that one man's form is another man's content. Cognitive developmentalists may seek solace from the fact that this problem is also common to other approaches, notably social learning theory.

A further problem relating to this distinction is the impact of content on moral development. Not all changes in moral attitude are accompanied by changes in moral structure, while persons with the same moral reasoning may hold beliefs with differing degrees of conviction. The impact of content on moral life is vividly illustrated by Gilligan's (1976) analysis of shame (where the source of moral sanctions resides in others) and guilt (where

conscience constitutes moral sanction) cultures. Not all shame-orientated cultures show the aggression and fear of ridicule seen in the Kwakiutl, while the pacifism and piety of the Hutterites represents an extreme guilt culture. Structural analysis would be insensitive to the heterogeneity in each form of culture. As Alston (1971) correctly points out "morality is content, as well as form and we need to know both" (p 283). Cognitive developmentalists would do well to heed these words.

Simpson (1974, 1976) extends the above viewpoint by arguing that differences in moral reasoning derive from 'personological structures'. She contends that moral judgement is intimately related to the gratification of Maslow's psychic needs which she concludes accounts for the lag in moral reasoning displayed by delinquents and lower socio-economic groups, as well as the absence of principled reasoning in tribal communities (Kohlberg, 1968). While Simpson's reasoning requires empirical validation the cultural and class differences she notes in the implementation of concepts such as justice imply that content determines which structures are used and how. Evidence of regression from principled reasoning to egocentric hedonism (Kohlberg & Kramer, 1969) following environmental change (i.e. admission to college) seems to support this viewpoint. Despite the contention that this regression is functional rather than structural it seems possible that content may in certain circumstances determine structure.

The present approach's neglect of content should, however, be seen as relative rather than absolute. Kohlberg (1971) for example, admits that content influences individual judgement but that its impact varies with developmental stage. Preconventional and conventional moral

reasoning are by definition open to specific content influences but even principled reasoning shows some 'stretch' in that "Socrates was more accepting of slavery than was Lincoln, who was more accepting of it than King" (Kohlberg, 1971, p. 178). However, the preoccupation with changing moral structures may provide a valuable epistemology but prove inadequate as a psychological theory of moral judgement. Cognitive developmentalists have recently accepted this point and have placed moral stages into a broader ego developmental framework (see e.g., Kohlberg, 1976 a).

It is perhaps in the developmental framework implied by a stage model that the strength of this approach lies. In contrast to the psychoanalytic stage model, moral reasoning stages are not instinctual-libidinal but result from interaction between the structure of an active organism and that of the environment. Furthermore this interaction leads the individual towards greater equilibrium with development, that is, greater reciprocity between the self's actions and those of others towards the self. Nor is the ego derived from and subservient to the id for, as Loevinger and Wessler (1970) point out cognitive developmentalists are united in regarding the ego as an impulse controller and integrating function within the personality. Inasmuch as cognitive developmental stages differentiate this approach from the psychoanalytic viewpoint, they also distinguish it from social learning theory. Development is not viewed in terms of a linear progression (social learning theory) but as a series of transitions between stages, each representing a particular logic structure which integrates moral concepts at that level making it distinct from any other. These stages proceed beyond mere conformity, as development is dynamic not merely an internalisation of external parental (psychoanalytic)

or cultural (social learning theory) norms.

Cognitive developmental theories,however, differ in the number of stages, their substantive nature, as well as the emphases given to factors producing progression through them. However, as stages form "the core of the cognitive-developmental position" (Kohlberg, 1969, p.352) this concept will be discussed before considering the theories of Piaget and Kohlberg, the major proponents of this approach.

2.2 The Question of Stages in the Development of Moral Judgement

The long standing polemic surrounding developmental stages remains unresolved although the nature of the controversy appears to be changing. Whereas earlier writers tended to concentrate on such sterile issues as qualitative versus quantitative changes in development (e.g., Werner, 1957) recently some theorists have shown more concern for methodological difficulties in respect to different stage models (e.g., Wohlwill, 1973). The earlier confusion of order in development, stages and maturation, factors which Uzgiris and Hunt (1975) clearly show are not inseparable, may be responsible for much of this controversy. In fact, following conceptual clarifications such as that offered by Flavell and Wohlwill (1969) it appears that the whole question may not hinge on the explanatory adequacy of this construct but rather reflect a methodological problem regarding the treatment of developmental data. Quite conceivably the whole 'stage issue' might represent a pseudoproblem incapable of empirical validation.

Part of the difficulty with this construct also results from the varying meanings given to the term 'stage' and the status-descriptive or explanatory- which should be accorded ' ssen (1962) points out that 'stage' is not an observation word like 'bla blue' but a theoretical term which takes it meaning from

the context of a particular theory. However, Kessen's analysis leaves the potential promise of this construct unfulfilled. As Flavell and Wohlwill (1969) point out, the stage concept is best used not at the descriptive level as a methodological tool, but rather as "approaching more closely to the level of explanation identified with the hypothetical construct" (p. 92).

It is in this sense that 'stage' is used in cognitive developmental theories of moral development for the "concept structure of the stage is not contingent on a specific psychological theory" (Kohlberg, 1976 a, p. 47). Since Kohlberg is the only cognitive developmental theorist to have fully analysed this concept in the moral realm his criteria for stages of moral judgement are cited;

> " 1. Stages are 'structured wholes', or organized systems of thought. Individuals are consistent in level of moral judgement.
> 2. Stages form an invariant sequence. Under all conditions except extreme trauma, movement is always forward, never backward. Individuals never skip stages; movement is always to the next stage up.
> 3. Stages are 'hierarchical integrations'. Thinking at a higher stage includes or comprehends within it lower stage thinking. There is a tendency to function at or prefer the highest stage available" (Kohlberg, 1975, p. 670).

Elsewhere Kohlberg (1969) states that the question of sequence is an emptrical issue elucidating processes of development. More specifically, he contends an ontogenic sequence necessarily invokes an interactional interpretation of development. Adopting a stage notion thus provides a perspective leading to a different type of data interpretation, as well as different methods of treating data.

In addition Kohlberg (1976 a) claims that while a stage typology is not itself a theory, as a developmental description it has radical implications for a theory of moral development. He appears to be referring to the 'giant steps' which characterise changes in moral growth. Conceptual analysis however, suggests that he may be constructing an edifice in honour of a pseudoproblem.

In this respect Flavell and Wohlwill's (1969) distinction between changes "first-in-competence and always-in-competence" and the very different case of "not-in-competence" to "first-in-competence", proves useful. Neither provide Kohlberg with substantial support suggesting his arguments merely reflect personal preference. Considering the first case, Flavell and Wohlwill suggest that while developmental transformations may appear abrupt if one considers the subitems comprising its 'form' each may emerge in an abrupt manner but "in an staggered order over an extended period of time" (ibid., p. 80). Different reference levels therefore determine the nature of development. In the latter case ("not-in-competence" to "first-in-competence") it is argued that the peaks and troughs of development are a function of value judgement and consensus. Piaget appears to implicitly recognise the applicability of this point to the moral domain in stating that between two structures "a succession of intermediate degrees could be found" (1932, p. 77). Not suprisingly, Flavell and Wohlwill conclude in respect to cognitive development that it will,

> " probably appear less and less saltatory in the sense under discussion as the gaps in our factual knowledge about cognitive growth are gradually filled and as new theories emerge to compete with present ones" (1969, p. 82).

This viewpoint is particularly pertinent to the field of moral judgement as it is an area characterised by a dearth of competing theories.

Conceptually, the question of stages in moral judgement development thus appears to represent a pseudoproblem. In addition the issue is empirically meaningless for Taylor (1974, p. 86), in developing a psychometric measure of moral judgement notes,

> " It is a purely academic pursuit however, to deliberate over whether moral development is a discrete or continuous process, for there is no

> way at present of assessing moral reasoning along a continually variable dimension".

Furthermore, attempts to compare the linear social learning approach to cognitive developmental stage theories is to confuse moral behaviour and moral reasoning. A more fundamental question is to ask whether stage models account for the variance and consistency in moral thinking in a way that other theories cannot account for as well. To answer this question, however, requires multivariate analyses of the qualitative responses undergoing development. In the absence of such investigations the "...usefulness of the stage concept remains an open question today..." (Wohlwill, 1973, p.236).

2.3 Piaget

Piaget's work was instrumental in providing the study of morality with a much needed balance between the two polarities embodied in Kant's aphorism that percepts without concepts are blind and that concepts without percepts are empty. Conceptually, Piaget made the same sort of distinction Kant drew in contrasting the heteronomy with the autonomy of the will by distinguishing conventional morality from the following of a rational moral code. Into the press of this conceptual distinction he poured a potpourri of percepts by observing differences in children's moral judgements. Furthermore The Moral Judgement of the Child (1932) established a precedent for the multifaceted, present-day approach to moral judgement as it combined several areas of study in extending his theory concerning the child's conception of the world.

In fact, the central theme of this work that "All morality consists in a system of rules, and the essence of all morality is to be sought for in the respect which the individual acquires for these rules" (ibid, p. 1) represents an intersection of Kantian analysis, the sociology of Durkheim, and Bovet's

individual psychology. It is in how the child acquires respect for rules that Piaget differs. Having discussed the views of Durkheim, Fauconnet, Bovet and Baldwin (pp.326-414) on the relation of adult constraint, peer group cooperation, changing mental structures to moral judgement, and their intention it is concluded that each author neglected at least one of these aspects. Piaget, however, maintains that all four factors effect the type of moral judgement made at different ages.

Encompassing these moral changes is Piaget's conceptual model variously labelled as a 'two stage theory' (Hoffman, 1970), 'three-level schema' (Loughran, 1967) and the 'four stages of development' (Kay, 1968). These differing conceptions reflect confusion as to whether Piaget's is indeed a stage theory and in the number of stages or phases he postulates. Both questions result from Piaget's lack of clarity as he often expresses conclusions at different levels and in different contexts without qualification. For example, in discussing whether developmental changes in moral judgement represent differences in nature or degree he posits one cannot speak of stages but only processes and the proportions in which they are mixed (pp.77-79). He even demonstrates the co-existence of his two major moral judgement levels in the same child and hence sees them as overlapping the second of which, "gradually succeeds in dominating the first" (p.133). Nevertheless he frequently refers to 'stages' although he never mentions their formal characteristics*. Despite his usage of this term one concludes that his is not really a stage theory and therefore research investigating the consistency of his 'stages' cannot be used to validate

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* It seems likely that Piaget uses the term loosely as this book was written before he elaborated his stage theory of intellectual development.

or negate his theory.

With respect to the second question concerning the number of 'stages', Piaget hints at up to four levels namely, egocentric, authoritarian, reciprocity and equity but states "the only question which interests us" (p. 16) is whether the child subscribes to a heteronomy of divine law or is aware of his own autonomy. Piaget thus posits two developmental levels, the earlier being that of heteronomy, moral realism or a morality of constraint, the latter, a morality of cooperation. In contrasting the younger, constraint-dominated child in which rules are seen as external and unalterable, and the older, autonomous child, Piaget provides a much needed if tenuous thread to link the nine moral dimensions he investigated.

It is suggested that Piaget's focus on the contrast between heteronomy and autonomy may be an artifact of his particular sample as this is the most apparent and fully completed change in 6- to 12-year-olds. As a result he neglects other stages of moral judgement and even fails to fully detail aspects of his theory such as the development of true autonomy which only emerges in adolescence. Instead, Piaget merely assumes that cooperation or reciprocity will lead the child to equity without explaining how this process would take place. It is noteworthy that this assumption implicitly infers a further moral judgement phase where autonomous rules constitute ideals always approved by society. Thus there would exist a normative autonomy reflected in b society and individual. However, it is consequently impossible t plain the exemplary lives of persons such as Socrates who were re d by society. Piaget recognises, but finds no solution to, this fundamental dilemma and

simply quotes Durkheim, "Socrates expressed more faithfully than his judges the morality that suited the society of his time" (p. 340).

Piaget can also be criticised for restricting his sample to a small number of lower class Genevan children, thereby neglecting individual, cultural and sex differences. While Piaget acknowledges these factors allowing that his results may have been effected if his studies had been carried out under different conditions, the gravity of this omission cannot be overemphasised. The crucial issue is whether, with a different sample, he would have obtained results enabling him to maintain the essential structure of his theory. Another allied criticism relating to the validity of Piaget's inferences is that made by Harding (1953) with regard to the gulf between Piaget's interviews and observation of children's games on the one hand, and his highly sociological interpretations on the other. Harding in discussing the sections of Piaget's book, writes,

> "The sociologist will feel that in this latter part Piaget is at last coming to the heart of the problem; the psychologist will be bored and let himself sink back into an armchair furnished with the air cushioning of polysyllables. Most psychologists would want their eventual generalisations to refer not to broadly described social trends but to innate psychological processes in the individual members of the group" (ibid., p. 44).

Although Piaget can be severly criticised for going beyond the information given, his theory is perhaps most fairly evaluated in terms of its major aims, namely to demonstrate a developmental change in moral judgement and to determine how the factors of adult constraint, peer group cooperation and changes in thought processes interact to produce these changes. The former is cogently demonstrated by Piaget and is now widely accepted although the developmental nature of his particular dimensions has been questioned. To the extent that inconsistency

in age-related changes has been found (e.g., Curdin, 1966; Havighurst & Neugarten, 1955; Medinnus, 1959) these may result from the content-based nature of some of his dimensions, rather than the inadequacy of his theoretical conceptions.

With regard to the latter three factors Piaget argues that the earlier forms of moral judgement stem from the natural tendencies of the child's mind (egocentrism and realism) and adult constraint (relationships of unilateral respect) while moral autonomy emerges when the child enters into relationships of mutual respect and cooperation (via the peer group). Piaget's interview technique may have decided advantages but it is impossible to determine the relative significance of these three variables, each acting on moral judgement and on the other two, using this method. It seems therefore that the influence of these factors cannot embody anything more than Piaget's subjective judgement, which accounts for the contradictory nature of most subsequent research. The complexity of evaluating the significance of these variables is illustrated in Piaget's vacillation regarding the relative importance of social and intellectual factors in moral judgement.

Piaget speaks of a parallelism between intellectual and moral development stating that "Logic is the morality of thought just as morality is the logic of action" (p. 398). At times he even hints at a one-to-one correspondence between changes in intellectual structures and moral judgement, a fact which makes the restriction of his study to children who have not fully attained formal operations even more surprising. At other points, however social interaction appears to be more central, for Piaget also concludes, "Mutual respect therefore appears to us to be the

necessary condition of autonomy under its double aspect, intellectual and moral" (p. 103). One possible means of investigating the relative importance of these two factors is to study a population in which either social or intellectual skills may be impaired (e.g., the learning disabled) and determine the effect this has, if any, on moral judgement. If, for example, adequate moral judgement was found in the presence of impaired social but not cognitive functioning (or vice versa) this would provide evidence for the primacy of one of these two factors.

Confronted with the task of reviewing Piaget's theory of intellectual development Pikas (1966, p. 135) maintains that one should discuss it thoroughly or not at all, a sentiment equally applicable to his theory of moral judgement development. However, the very breadth of Piaget's work in the moral domain precludes the former while the latter would deprive the present study of a rich resource thereby rendering it incomplete. In choosing a middle path the author has attempted to delimit some of the problems in Piaget's theory. The intention however, is not to obscure the value of his pioneering effort. Briefly, Piaget defined the domain of morality and offered a model for the psychological analysis of moral judgements. In addition his observations of developmental differences in moral thinking provided a map by which to chart developmental progress. Finally, he illustrated techniques for gathering information and showed how the cognitive developmental approach was relevant to moral research. Piaget's contribution is aptly captured by Peters (1974, p. 223) when he concludes that "Piaget's distinctions provide a useful framework for research. The details, however, of this descriptive apparatus need clarifying and tightening up".

2.4 Kohlberg

Kohlberg (1958, 1963, 1964, 1968, 1969, 1970, 1971, 1973, 1975, 1976) has systematically amplified Piaget's theory and method and offers the most comprehensive theory of moral judgement to date. Like Piaget, Kohlberg views moral growth in legalistic, structural terms but extends his analysis beyond childhood to consider adult forms of moral reasoning. Not suprisingly, the two theories differ in the number and nature of moral judgement levels postulated, as well as the end point of development. Kohlberg rejects Piaget's two process schema and posits six moral judgement levels which he claims, exhibit the same features as Piaget's intellectual stages, namely sequentiality, hierarchical integration of lower into higher levels, gradual consolidation of stages in formation, structural wholeness and equilibrium (Piaget, 1960)*. Thus the end-point of development is not autonomy, normally reached at approximately 12 years, but principled moral reasoning, attained by very few people.

Such discrepencies however, reflect more that the differing scopes of each theory. While Kohlberg accepts Piaget's cognitive developmental approach, his starting point is somewhat different in that,

> "the epistemological blinders psychologists have worn have hidden from them the fact that the concept of morality is itself a philosophical (ethical) rather than a behavioural concept ... one needs to orient developmental research to philosophic conceptions of morality" (1971, p. 152).

Accordingly, Kohlberg claims his stages represent an hierarchy, not only of development but also of moral adequacy, the criteria adopted being those of the formalist school of philosophy, that is, ideality, universalism, impersonality

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* Kohlberg thus also rejects Piaget's (1932, p. 266) claim that "...there can be no clear-cut stages in moral psychology".

and pre-emptiveness. The end-point of development is thus also derived from philosophical analysis. This orientation is important in that it leads to the extreme cognitive emphasis in Kohlberg's theory, a factor more fully discussed later.

As a philosopher, Kohlberg notes the value of insights in ethics for psychology, but as a psychologist he conversely argues that the developmental study of moral judgement might also elucidate philosophical problems in ethics. For example, the philosopher's task cannot be to clarify moral language if six such language systems exist. In fact, Kohlberg posits a parallel between moral psychology and formalistic moral theory because a psychological theory as to why children move up the hierarchy and a philosophical explanation of the moral superiority of a higher stage are "one and the same theory extended in different directions" (1971, p.154). However, despite this claim it should not be presupposed that what makes philosophical sense guarantees psychological sense and vice versa. It will be argued that on both counts Kohlberg can be severely criticised.

Philosophically, one may contend the logical necessity of each stage representing greater moral adequacy. Kohlberg's claim for the inferiority of a social-contract orientation (stage 5) to a universal ethical principle orientation (stage 6) is highly subjective. Stage 6 incorporates a deontological position as opposed to the teleological utilitarianism of stage 5. Kohlberg, despite his ill-developed claims for the greater adequacy of stage 6 in formalistic terms, has adopted the arbitrary position that deontology is superior to teleology. Understandably Peters (1971) and Alston (1971) have disputed Kohlberg's claim to have defined the end-point of morality. Perhaps such criticism is premature as Kohlberg has not yet written a com-

plete theoretical justification for his stages (Rest, 1974a). In view of his continued claims for, and use of the hierarchy, such an account is long overdue.

Kohlberg's subjectivity is also manifest in the substantive nature of his theory. Peters (1971) suggests Kohlberg is prescribing one of several moralities by valuing a sense of justice more highly than, say, compassion or sympathy. One could argue Kohlberg's position by postulating a unity in moral development but Kohlberg is careful not to do this. Hence Peters concludes "His account of moral development might therefore be considered to be one-sided in that it has been erected on the features of a limited interpretation of morality" (ibid., p. 263).

Such criticisms reflect the fact that it is often not clear whether Kohlberg sees his theory as one of moral judgement or general moral development because he tends to use the terms 'moral judgement' and 'moral development' interchangeably. If his writings apply only to the development of moral judgement, Peters' criticism seems unjustified. However, Kohlberg often makes generalizations encompassing the broader area of social development leaving the impression that an understanding of moral judgement equals an understanding of moral development. It is suggested that this results from the emphasis Kohlberg places on moral judgement for moral development and, more importantly, on the centrality of cognitive processes in his theory. To the extent that Kohlberg considers social development to be cognitively based "because any description of shape or pattern of a structure of social responses necessarily entails some cognitive dimension" (1969, p. 372) so he generalises his statements regarding moral judgement.

Unlike Piaget, Kohlberg thus consistently emphasises cognitive factors in moral development stating that cognitive processes are necessary, but not sufficient conditions, for moral judgement. Hence a person who may be cognitively impaired (e.g., a LD child) will necessarily exhibit less adequate moral judgements. However, not all cognitively intact persons will manifest the parallel stage of moral judgement. Kohlberg suggests this results from inadequate social development, namely, a lack of role taking opportunities. According to Mead (1934) and Baldwin (1906) logical and social cognition differ in that the latter involves the tendency to react to the self in the role of another and to react to the other as similar to oneself. Accepting this viewpoint Kohlberg stresses the importance of role taking opportunities for adopting differing perspectives in moral dilemmas. As each moral stage implies increasing differentiation of reciprocity, role taking is thus important for moral judgement. Hence Kohlberg sees the family, peer group and secondary social institutions (e.g., law making) as equally important for moral judgement development insofar as they offer role taking opportunities. It is social stimulation in these terms which promotes moral growth.

Kohlberg thus clearly states the factors which facilitate movement through his stages, maintaining that,

> " A great deal of the variance in level of moral judgement remaining after the intellectual variance has been removed is accounted for by social environmental factors which may be called 'amount of opportunities for role taking'" (1971, p. 190).

In several papers Kohlberg (e.g., 1970, 1973 b, 1975) details how his theory can be applied to promote moral growth. Hence exposure to moral conflict both in the laboratory (Turiel, 1966) and the field (Blatt & Kohlberg, 1976), creating a just community (Kohlberg, Scharf & Hickey, 1972) and

participatory democracy (Kohlberg, 1975) have all been investigated and found to be related to moral judgement development. However, Kohlberg has not extensively explored the converse approach of investigating populations likely to be deficient in cognitive and/or social development to see whether this effects moral judgement.

All Kohlberg's theorising on moral growth and education concerns movement up his stage hierarchy. His theory therefore rests on the adequacy of his moral stages which are often merely assumed correct. In addition to the earlier philosophical criticisms regarding his hierarchy, a number of psychological questions are appropriate. Perhaps the most important of these concerns sequentiality for "If our stages of moral thinking are to be taken as supporting the developmental view", says Kohlberg, "evidence...of sequentiality is required" (1963, p.15). Kohlberg offers several lines of evidence to support sequentiality, one of the most important is that his stages form a Guttman 'quasi complex'.

Showing such a pattern of correlations among his stages is, however, statistically meaningless as it is based on invalid procedures. In Kohlberg's Moral Judgement Scale (1958) each element of a response is rated at some stage and thus elements at each stage are not independent. An individual's responses thus form a distribution among the stages. As Loevinger (1974) points out, Kohlberg treats this data as a profile, converting the frequency of responses at each stage to a percentage and then intercorrelating the stages. Kohlberg thus confuses a factorial type and a stage sequence-model of moral development thereby producing a meaningless quasi simplex. Furthermore, Kohlberg carries out this procedure on his doctoral data (1958), the very data from which he constructs his stages. Again this is questionable as it

equivalent to validating a test on the data from which it was constructed.

Kurtines and Grief (1974) have also criticised Kohlberg on this point by showing that inversion of stages within moral judgement levels (preconventional, conventional and posteconventional) also provides evidence supporting an invariant sequence of stages. In fact these authors have critically analysed all the data forwarded to support an invariant stage sequence and in each case found it faulty. They conclude, that,

> " Not only is there no clear-cut evidence supporting the assumptions of invariance of stages and their hierarchical nature, but there is also evidence suggesting that these assumptions may be incorrect...the value of the model remains to be demonstrated" (ibid., p. 469).

The problems with Kohlberg's stages are perhaps not suprising when it is remembered that he based them on the six developmental types of value orientations 'isolated' in his doctoral study. However, as Kohlberg himself notes, these six types reflect the limited variation of his sample and were hence rather arbitrary (1958, p. 89).

Wohlwill (1973) postulates that the weakness of Kohlberg's model resides rather in his moral judgement measure, which he suggests deals not with the patterning of responses, but behavioural variability. Furthermore, he posits that Kohlberg has constructed a six-step sequence of moral reasoning but that these 'stages' represent a "more primitive...loosely structured construct, than Piaget's" (ibid., p. 200) as there is no structural network connecting responses at different stages. Kohlberg's instrument has also been criticised for using dilemmas which have become obsolete because of his new systems scoring method, the variation in realness across different dilemmas, lack of standardization regarding administration and the absence of data relating to various aspects of reliability and validity (Kurtines &

Grief, 1971; Taylor, 1974). Lastly, correct use of this measure requires extensive training in intricate administration and scoring procedures available only from Kohlberg himself*. In addition such knowledge quickly dates as Kohlberg is continually revising his scoring systems. In view of the above criticisms of Kohlberg's instrument it remains possible that his hierarchy does represent development and the lack of conclusive empirical evidence merely reflects inadequate assessment.

Finally, one may question Kohlberg's neglect of environmental factors in moral judgement. It is possible to relate his stages to social institutions which may determine the internal cohesiveness and stability of each stage. While stages 3, 4 and 5 correspond to the family, institutions of law and order (*i.e.* Hce etc.) and democracy respectively, stage 2 (business) and stage 6 (the church) are only tangentially related to such institutions. In view of the difficulty with these stages it is possible that some might reflect an environmental interpretation while others may be more cognitively based. The universality of Kohlberg's stages could thus result from universal institutions in addition to cognitive development. For example, stage 5 occurs infrequently in societies without an established democracy.

Despite these difficulties, Kohlberg's is the most widely accepted cognitive developmental theory in the field of moral judgement. His work has been taken into account by almost all other theories of moral development and contemporary research tends to be increasingly conducted in a Kohlbergian framework. As Kohlberg delineates more precisely than Piaget the integri-

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* In response to a personal communication requesting unpublished manuals Kohlberg merely replied by inviting the author to attend a Harvard workshop on scoring. This esoteric approach is felt to be highly undesirable as it discourages independent research.

ties necessary for moral judgement development the present study also stems directly from his theory. The use of his theory in a test of the cognitive developmental approach seems particularly appropriate in view of its widespread adoption despite the above mentioned problems.

General aspects of the cognitive developmental approach to moral development together with Piaget's and Kohlberg's theories have been outlined in the present chapter. The purpose of this discussion has been to define the conceptual framework of the present study and in particular to emphasise the integrities necessary for moral judgement development. This latter aim stems from the suggestion made in chapter one which forms the basis of this study namely, that a population deficient in cognitive and social skills should manifest impaired moral judgement. Learning disabled children appear to be eminently suited to test this postulate as will become apparent in the next chapter which reviews the field of learning disabilities.

CHAPTER 3

Learning Disabilities: the Complex, Confused Conglomerate ...

The sudden emergence of learning disabilities as an area of special education is analogous to the recent burgeoning of research in moral judgement. Like the field of moral judgement, learning disabilities was only fully established as a distinct discipline in the early 1960's even though interest in this area can also be traced back to the turn of the century (cf. Morgan's (1896) investigation of 'word blindness'). Although temporally synchronous the two areas developed independently, their genetic structure and early environments being totally dissimilar. The LD field, unlike that of moral judgement, was not born to a unified framework of thinking and its development has been largely determined by practical need as learning disabilities "represent the single greatest medical problem of American children today" (Tarnopol, 1971, p. xi). Both these factors have, according to Hallahan and Cruickshank (1973, p. 271)" resulted in a vacuum of essential knowledge regarding basic constructs". This is cogently demonstrated in the terminological confusion surrounding these children who despite intact sensory and emotional functioning as well as average to above intelligence, cannot cope with academic tasks.

Cruickshank (1972, p.5) has aptly captured the position of this field in describing it as a "complex, confused, conglomerate of ideas and professional personnel". Its scientific status is however, more appropriately characterised by Kuhn's (1962) terminology - in the absence of theory capable of explanation and prediction the LD field

lies at the 'pre-paradigm' stage. This is primarily the result of the field's unique evolution and hence the following discussion of conceptual issues, the symptoms associated with LD children and finally their relation to moral judgement is replete with historical references.

3.1 Conceptual Issues

In order to place the present study in perspective it is necessary to consider a number of issues generic to research on learning disabilities.

3.1.1 Definition

In an attempt to establish learning disabilities as an area in special education its umbilical cord with the past and with other areas of exceptionality was prematurely severed. Hallahan and Kauffman (1976) believe this isolationist tendency was the single most significant cause of the present terminological confusion. Most terms reflect differing definitions which is to some extent inevitable in a field representing an interface between medicine, education,psychology, language and several other professions (Lerner, 1971). Each profession has jealously guarded territorial imperatives by adopting its own label. Reflecting background, training and personal preference a number of terms have therefore evolved some of which are minimal brain damage, brain-injured (medical), educationally handicapped, dyslexia (educational), language disorders, psycholinguistic disabilities,aphasoid syndrome (language), hyperkinetic syndrome, conceptually handicapped (psychological). In fact, Cruickshank and Paul (1972) mention forty terms which have been used interchangeably to refer to LD children, a recent addition being the 'structopathic child' (Kok, 1972).

This profusion is perhaps understandable when one realises that an

appropriate label needs to meet the requirements of parent, child and government as well as the various professions involved. The uniqueness of each child's problem, the stage of the learning difficulty and the varying importance of different sense modes with age, further complicates the definition problem and emphasises the sterile nature of the 'either or' type polemic which characterises this question. Despite such difficulty there is some consensus as Vaughan and Hodges (1973), in polling a hundred LD experts, found that while they could not specify what a learning disability was, they were able to agree on inappropriate LD definitions. Although an adequate definition may thus evolve via exclusion the ramifications of the definition problem call for a more parsimonious resolution. As Mc Carthy (1971, p. 11) has stated,

> "... the most important decision you will make is that of definition - because your definition will dictate for you the terminology to be used in your program, the prevalence figures, your selection criterion, the characteristics of your population, and the appropriate remedial procedures".

Mc Carthy points out that one's definition is closely related to the label one uses The evolution of different labels in this field is thus outlined as it clearly illustrates the nature of the definition difficulties generic to the LD concept.

Early pioneers in this field attempted to replicate Goldstein's (1939) work on brain-injured adults using children as subjects. It is therefore not surprising to find that in Psychopathology and Education of the Brain-Injured Child, hailed as the genitor of this field (Lerner, 1971), Strauss and Lehtinen (1947) postulate that the learning and behaviour problems of their subjects were not emotional or psychogenic but

manifestations of brain-injury. Despite the revolutionary impact of this concept (see Nielsen (1966) and Schulman, Kaspar and Throne (1965) for the research it generated in the 1950's) many objections were raised. Stevens and Birch (1957) summarise these into four points. First 'brain-injured' is cause-oriented and therefore does not relate to the behavioural symptoms of this condition. Secondly, the term can be related to other conditions which are not associated with the child under consideration. Thirdly, 'brain-injured' does not aid the development of a teaching programme. Finally, as a descriptive concept the term is too broad in meaning and easily leads to over-simplification. The authors suggested a more appropriate classification would result from the term 'Strauss syndrome' which would describe children who exhibited many of the following characteristics; erratic behaviour, persistent hyper-activity, poor motor performance and organisation of behaviour, persistent faulty perceptions and hyperactivity, inordinate distractibility and increased motor activity.

Several other terms including 'neurophrenia' (Doll, 1951), 'the other child' (Lewis, Strauss & Lehtinen, 1960) and 'minimal brain dysfunction' (Clements, 1966) emerged in the race for a new label. As these terms implied a brain dysfunction which did not manifest in gross neurological deficits but which caused a learning difficulty and therefore prohibited the realisation of intellectual potential, they were considered preferable.

The most popular of these, 'minimal brain dysfunction', although prima facie an improvement was subject to criticisms similar to those mentioned above. Myers and Hammill (1969), for example, question the logical status of such a concept maintaining that small damage to

cortical areas can produce severe behaviour deficits whereas gross damage to others results in little disability. Similarly, Cruickshank (1966, 1967) maintains the injury either exists or is absent while the psychological problems it results in are far from minimal. This criticism is compounded by the fact that there is no agreement or objective measure of minimal damage.

In view of these definition difficulties the whole issue of labelling has been questioned. Hammill and Bartel (1971) have summarised these objections in stating labels acquire a stigma, reduce teacher expectations, are interpreted causally and are meaningless for children displaying such heterogeneous behaviours. However, the question is not so much one of labelling, as all children are labelled, but of the appropriateness of the label in respect to the child's needs. As etiological terms describe neither the behaviour nor learning characteristics of these children a new set of terms consequently emerged.

The most widely recognised of these is the term 'learning disability' proposed by Kirk (1963). Although this term meets the call for an educational nomenclature (Gallagher, 1967), as Lerner (1971) points out, it does not specify the area of the learning problem nor the p[illegible]n which the child is deficient. Consequently, Wepman, Cruickshank, Deutsch, Morency and Strother (1975) in response to the United State's Secretary for Health, Education and Welfare's reappraisal of inappropriate classifications, insist that this term be reserved for children demonstrating a perceptual handicap. Although Hallahan and Kaufman's (1976) attempt to include emotionally disturbed and mentally retarded children under the term 'learning disability' their intention is similar to Wepman et al.'s

(1975). Broadening the term would, they contend, force a more specific delineation of each child's learning disability. Both these viewpoints focus on the child's specific needs and are therefore similar in intent to the anti-label movement. In a sense therefore the controversy with regard to the necessity of labels and definitions is in the present context, a non issue.

Despite the current popularity of the term 'learning disability', it is limited in terms of research (Hallahan, 1975; Torgeson, 1975) and therefore Johnson and Myklebust's (1967) concept of a 'neuropsychological learning disability', which combines psychological and pedagogical interests, might seem more appropriate to the present study. According to Johnson and Myklebust,

> "The root of the term, neurological, clearly discloses that the basic condition is organic and involves the central nervous system. The prefix psycho appropriately emphasises that an important concomitant is behavioural. The designation, psychoneurological, therefore indicates that the disorder is in behaviour and that the causation is neurological" (ibid., p. 8).

Even though this approach combines both etiological and behavioural aspects it is not unanimously accepted in the literature. The whole definition issue in fact appears to be far from resolution for even the single factor common to many definitions, a deficiency in learning despite adequate vision, hearing, motor capacity and emotional adjustment, has recently been questioned as a sufficient basis for the homogeneity of LD children (Hallahan, 1975; Hallahan & Kauffmen, 1976; Torgeson, 1975). Although Cruickshank (1976) believes consensus may be imminent, even in his optimism he admits it will take some time for a definition to be universally accepted.

Any formal definition adopted in the present study would therefore be arbitary and merely reflect personal preference. Until Cruickshank's dream is realised it seems more appropriate to follow Mc Carthy (1976) who reasons

that in the meantime, present definitions "... can be operationalised in such a way as to effectively include those children who are learning disabled" (p. 317). The operational definition outlined in chapter one thus appears to be the most suitable for this study.

In conclusion, it should be noted that the question of terminology does not merely constitute a semantic lag but underlies the empirical and conceptual confusion in this area. The choice of an appropriate label does not therefore constitute a solution - at best it can only communicate an answer to the key definition question. With this door open other factors also contributing to the "complex, confused, conglomerate" may accrue their due attention.

3.1.2 Ability Deficits

Closely related to the question of definition is a topic likely to increase in importance, the competence-performance distinction. This approach has been profitably used in psycholinguistics (Chomsky, 1957) and it is here that the distinction has been most succinctly drawn,

> "Competence is an abstraction away from performance; it represents the knowledge a native speaker of a language must have in order to understand any of the infinitely many grammatical sentences.... Performance is the expression of competence in talking or listening to speech. One is competent to deal with an infinite number of grammatical sentences; but one's performance may be distracted in various ways .... irrelevant to competence." Mc Neill (1966, pp. 16-17).

The recent application of this model in the field of learning disabilities appears to have led to some confusion. On the one hand, Torgeson (1975) suggests that approaches to remediation should be determined by whether the disability reflects an underlying structural defect or a performance variable. Hallahan (1975) on the other hand, maintains that only performance variables are involved as LD children by definition possess competencies equal to those of normal achievers. Despite this divergence of opinion the important point

to note is that both writers deal with a concept which may prove crucial to LD research where an ability deficit is often uncritically assumed to explain task performance. Consequently, variables such as motivation are being mentioned in the LD literature if only to note that "amazingly little research has been done on this question" (Hallahan & Heins, 1976, p. 376). Such developments emphasise the isolation of learning disabilities as a field in special education as motivation has long been a key variable in the performance of retardates (Zigler, 1973).

At present one can only speculate at the extent to which such performance variables have influenced the rejection of various null hypotheses. The importance of this distinction thus cannot be overemphasised and without it, it is unlikely that the psychological processes underlying learning disabilities will be discovered making questions of etiology premature. In fact, Glanzer (1967) postulates a direct relationship between performance variables and remediation, as performance measures give no information on the processes involved in learning difficulties and how remediation should therefore take place. As the pioneers in this field were interested in educational questions, it is not surprising to find that Werner (1937) drew a distinction between test scores and psychological processes. The revitalisation of this issue represents a return to the womb, a healthy sign as the area of learning disabilities has dented much in its history which is potentially valuable. It is perhaps timely to heed Newton's modest words, "If I see farther than others, it is because I stand on the shoulders of giants". In standing on Werner's 'process versus test score shoulders' it is quite possible that future LD research may find learning processes comprise several subprocesses and hence revolutionise work in this area.

3.1.3 Research Problems

The choice of a framework for research is important as it influences both research goals and procedures which in turn determine the usefulness of data obtained. Unfortunately this is not always considered in LD research where goals are often inappropriately specified. Hence, for example, many studies addressed to remediation are actually more suited to developing predictive indices of learning disabilities (Torgeson, 1975). Furthermore much research has not been conducted within any conceptual scheme and results tend therefore to lack coherence. Consequently, the advancement of this field is hampered as the reciprocal interaction between research and theory is severely limited.

The urgency surrounding a LD, which "if left unaided, usually have more devastating effects on children than most childhood diseases" (Tarnapol, 1971, p. 1) may be partly responsible for this, and may also result in the unsound methodology generic to much LD research. The latter has caused some concern over the willingness with which data is accepted (Mc Carthy, 1976) as many studies have no control groups, do not specify population characteristics, use parametric statistics where requirements of homogeneity of variance and normal distribution of errors are not met and tend to evoke causal explanations when the study is correlational (see Hallahan (1975) and Torgeson (1975) for a review of the problems facing researchers in this area). Instead of these limitations reflecting a considered comprise between the inevitable practical difficulties involved in experimentation, they often result from the politics of research. The emphasis on originality and the 'publish or perish' syndrome are antithetic to consensus and pooled knowledge which is fundamental to further progress in this field.

Until such agreement is reached and results in improved methodology a sceptical attitude towards research findings should be maintained. However, in the absence of a universally - accepted definition this remains an important, though at times unreliable source of information with regard to the symptoms characterising LD children.

3.2. Symptoms Associated with Learning Disabilities

In view of the confusion regarding appropriate labels and defintions, it is not surprising to find different researchers presenting divergent symptoms as characteristic of LD children. Clements (1966) attempted to systematise this confusion by reviewing over 100 publications on symptomatology. Although a decade old Clement'sfindings are still quoted as attributes of LD children in some contemporary texts (e.g., Kauffman & Hallahan, 1976), and hence serve as a suitable springboard for the present discussion. Ninety-nine characteristics were uncovered, the ten most widely cited, in order of frequency, being;

> hyperactivity, perceptual motor impairments, emotional lability coordination deficits, attention disorders, impulsivity, disorders of memory and thinking, specific academic disabilities (e.g. reading, arithmetic etc), speech and hearing problems and electroencephalographic (EEG) irregularities.

It is important to note that many of these symptoms stem from clinical observation and have not empirically been shown to exist more frequently in a LD population. After reviewing LD research Hallahan (1975) however, concludes that except for laterality and hemispheric dominance, there was not "any conclusive evidence to indicate that learning disabled children are equal to normal children in any areas of functioning" (p. 53). This statement is

immediately qualified as Hallahan maintains that these 'tentative results' should not lead to 'definite' conclusions owing to unsound methodology.

Although present-day researchers reject many of the symptoms suggested by Clements (1966) a number, such as, attention disorders and perceptual motor impairments, are still widely cited in the current literature. In addition, several further characteristics, including low self-concept and unpopularity have been attributed to this population. These symptoms will be considered insofar as they effect the cognitive processes and social skills directly relevant to this study.

3.2.1 Cognitive Processes

According to some views of cognition the characteristics of LD children should result in impaired cognitive processes. For example, the high incidence of perceptual problems in the LD population (Lerner, 1971; Wepman et al., 1975) will necessarily, in terms of Bruner's (1966) unitarist theory (that there is a linear relationship between perception and conception), lead to cognitive deficits. On the other hand a theory such as Piaget's (1969) or Olson's (1970) allows adequate cognitive functioning in the presence of perceptual difficulties. If cognition is indeed the process by which sensory input is transformed, reduced, elaborated, stored recovered and used (Neisser, 1967, p. 4) the reading difficulties of LD children render them cognitively impaired by definition as they imply a breakdown in one or more of these processes.

Although an ideal method of investigating cognitive development is to study "... inefficiency in the strategies employed by human beings in thinking" (Bruner, 1966, p. ix) little research has been conducted on the cognitive processes of LD children. This is partly attributable to the legacy of early pioneers who emphasised perceptual motor development. It can be clearly

seen in a survey of articles in six professional journals between the years 1936 and 1970 which reflect " ... a continuous predominance of interest in perceptual-motor behaviours as compared to cognitive-language behaviours and especially to socioemotional aspects of behaviour" (Hallahan & Cruickshank, 1973, p. 157). Generalisations as to the conceptual impairment of LD children (e.g., Brutten, Richardson & Mangel, 1973; Homan, 1970; Lerner, 1971) are thus unwarranted yet are perhaps understandable in the light of this syndrome being attributed to some brain damage or dysfunction as loss of conceptual ability is a classical symptom of cerebral lesions (Battersby, Krieger, Pollack & Bender, 1953).

Much of what is known about the cognitive abilities of LD children has been extrapolated from earlier work done with the brain-injured. Strauss and Lehtinen (1947) on the basis of various categorisation tasks found "peculiarities in thinking, reasoning and concept formation" (p. 54) among their subjects. In particular, they noted formalistic behaviour in the arrangement of objects, a finding replicated by Strauss and Kephart (1955) who also found the brain-injured tend to build rigid schemata and do not easily develop new concepts. Similar results have emerged in more recent research as disabled readers performed poorly on a symbolic learning task (Walters & Doan, 1962), concept formation tasks (Braun, 1963) and tasks requiring equivalence judgements of dissimilar materials (Cummings & Faw, 1976).

This data could be interpreted in terms of Harlow's (1949) concept of 'learning sets', that is, LD children may have difficulty in changing from one set to another. A study by Wirtenburg and Faw (1975) supports this reasoning as they found that while retarded readers learn a task solution as quickly as adequate readers, they are deficient in generalising the solution to different

but related problems. As noted by these investigators, it is possible to interpret the results in terms of an attention deficit which cogently demonstrates how symptoms associated with the LD population may effect their cognitive processes. Although there has been a great deal of theorising on the consequences of cognitive deficits in the learning disabled (e.g., Engelmann, 1969; Lerner, 1971), there is little direct research beyond the categorisation and concept formation studies cited above.

Indirect evidence of cognitive processes has however been accumulating in the form of standardised test score profiles such as that of the Weschler Intelligence Scale for Children. Besides analysis according to the traditional Performance and Verbal scales (Clements, 1966), profiles have been constructed according to Bannatyne's (1971) four category system (spatial ability, conceptualizing ability, acquired knowledge and sequencing ability) and Witkin, Dyk, Faterson, Goodenough and Karp's (1962) three factor model (analytic-field, attention-concentration and verbal-comprehension). The problem however, is not choosing which approach is most appropriate, nor one of replicablity but of interpreting results. For example, Huelsman (1970) in reviewing 20 such studies found LD children were generally low in Information, Arithmetic, Digit Span and Coding. But low Arithmetic scores may result from attention and memory deficits or a host of other factors besides poor arithmetic skills (Fincham, 1976a). As several equally plausible interpretations of this pattern could be forwarded such profiles should be seen merely as a first approximation to global cognitive processes. The information gained from such research does not therefore appear to equal the effort expended in its execution.

A possible exception is the study by Myklebust, Bannochie and Killen

(1971) which is important not only because it samples a wide range of cognitive processes but is one of the few which explicitly aims to determine the cognitive ability of LD children. On the basis of their results Myklebust et al., propose that the mental abilities of this group are structured differently to those of normal achievers. Furthermore, these abilities are held to be relatively independent so that success on one task is not predictive of that on another. Consequently, LD children may for instance be deficient on concept formation tasks but not Piagetian operations. As the latter are pertinent to moral judgement, research in this area will be reviewed.

Unfortunately, few studies utilising LD children have been conducted in a Piagetian framework while existing results are contradictory. Klees and Lebrun (1972) in analysing the figurative and operative thought processes of 40 dyslexic children administered Piagetian conservation, classification, seriation (stick ordering), and horizontality tasks. Although their dyslexic subjects did not differ from normals on the horizontality task they were retarded in their acquisition of conservation, classification and stick ordering. Contradictory results were obtained by Meltzer (1976) who found no difference between LD subjects and normal controls on eleven tasks measuring conservation, seriation and classification. Similarly Fincham and Meltzer (1976) could not differentiate LD and control groups on number conservation tasks. The confusing picture painted by these studies is emphasised by Klees and Lebrun's (1972) finding that their 'not very perceptually distured' dyslexic group obtained similar results to normal children on the classification task.

As none of these investigations found qualitative differences in the LD child's cognitive processes the issue appears to be primarily one of developmental retardation. At present it is not clear whether the learning disabled

manifest a disturbance in Piagetian cognitive processes. If present such a deficit would impair moral judgement, an integrity which is also effected by social skills.

3.2.2. Social Skills

There is a surprising degree of consensus regarding the socioemotional development of LD children. Hence social skill deficits are posited by 'psycho-behaviourists' (Hallahan & Kauffman, 1976) to be 'inextrixably intertwined' with perceptual, language, cognitive and motor impairments while psychoanalysts hold primary ego functions (e.g., language, perception) as necessary conditions for adequate social functioning (Rappaport, 1966, 1975). Such agreement, however, provides false security for, as noted previously, it exists in an empirical vacuum.

Like knowledge of cognitive processes, an understanding of socioemotional development is crucial to remediating learning difficulties and thus the dearth of research in this area is also surprising. It is perhaps understandable when one remembers that it is extremely difficult to empirically validate statements such as,

> " ... conspicuous and nonendearing qualities of many MBD infants would tend to impair the mother-child relationship from the beginning. Irritability, insatiability, and unpredictability do not reinforce the mother in her child-rearing efforts, but rather tend to weaken her ties to the infant. Whether or not the child outgrows these characteristics, their presence has affected his mother in ways that will continue to affect him" (Wender, 1971, p. 155).

This is testified by the fact that although the nuclear family is the logical place to study social development there is a marked absence of such studies in the published LD literature.

The fact remains, however, that sensitivity to social situations, ability to perform independent tasks, appropriate social behaviour and ability to

judge moods and attitudes in others are held to be impaired in the LD population (Lerner, 1971). Since Strauss and Lehtinen (1947) first observed an emotional shallowness in brain-injured children several authors (Baer, 1961, Benton, 1961, Lewis et al., 1960) have viewed social deficits as part of the LD syndrome. Only recently though was it suggested that the socially impaired child may have a separate learning problem. Johnson and Myklebust (1967) refer to this concept as a 'nonverbal learning disability' pointing out that it manifests not only as a deficit in person and self-perception but also in an inability to understand the relevance of space, time, size and direction. In fact,"it is experience itself which is distorted" (ibid., p. 273). Consequently, reductionistic attempts to account for a learning difficulty in terms of single factors such as language (e.g., Glenn, 1975) deny the complexity of this syndrome.

As there are few adequate measures for identifying LD childrenwith social disabilities (Lerner, 1971) no attempt was made to do so in the present study. It is possible that the sample irvestigated includes some of these children but in view of the fact that the greatest number of learning disabilities involve language disorders (Mc Grady, 1968) they are likely to constitute a minority. This does not preclude the possibility of impaired social skills in the present sample as all learning disabilities are held to effect social development. In fact Cruickshank and Johnson (1975) suggest that the field of learning disabilities necessitates a far closer relationship with clinical psychology than most fields of special education.

It is even argued (e.g., Crutekshank & Paul 1972; Rappaport, 1966, 1975, 1976) that the personality development of LD children does not follow the normal pattern because ego functions are disturbed by central nervous system

insult and experiences of continued failure. The latter is particularly important as the self is distinguished from others "by doing something which other people cannot do or cannot do as well" (Mead, 1934, p. 208) and thus develops in an interpersonal setting. In view of the LD child's inadequate academic performance, his difficulty in interpersonal relations (Baer, 1961; Bryan 1974a; Mc Carthy, 1976) and the relationship of academic performance to peer attitudes (Horne, 1975), it is not surprising to find those children low in self-concept (Black, 1974; Larsen, Parker & Jorjorian 1973; Rosser, 1974).

The sine qua non of a LD, inadequate academic achievement, thus appears to be closely related to social development. Whelan (1974) provides further evidence for this viewpoint in finding that academic progress often heralds a change in the social and emotional behaviour of severly disturbed children. A study by Mc Carthy and Paraskevopoulos (1969) also supports this argument as they found LD children exhibited a similar distribution of behaviour pattern scores to the emotionally disturbed. Furthermore, both groups differed from normals on their three factors namely, unsocialized aggression, personality problems and immaturity-inadequacy. Mc Carthy and Paraskevopoulos conclude that,

> "Conduct problem behaviour characterized by restlessness, disruptiveness, attention seeking, fighting, irresponsibility, tension, hyperactivity, distractibility, jealousy, etc., appears to be the main characteristic of both emotionally disturbed and learning disabled children" (ibid., p. 73).

These antisocial behaviour patterns are perhaps a logical extension of the LD syndrome which fosters increased susceptibility to factors such as teasing and rejection. In fact, Donas (1975) suggests that breaches of school regulations often compensate for school failures and there is indirect evidence to support inappropriate moral behaviour in the learning disabled. For example,

attention, which is held to be impaired in LD children (Dykman et al., 1971; Tarver & Hallahan, 1974) has been shown to be associated with resistance to cheating (Grim, Kohlberg & White, 1968). However, as Piaget (1932, p. 71) states the function of reciprocity in moral judgement is to "lead the child to the practice of reciprocity" it remains to relate moral judgement and learning disabilities.

3.3 Moral Judgement and Learning Disabilities

By presenting evidence which points to the impairment of cognitive processes and social skills an implicit link between moral judgement and learning disabilities has been forged. This connection becomes explicit in studies showing a relationship between several LD symptoms and the development of moral judgement in normal children.

An illustrative example is provided by the role of social participation in moral judgement development. Keasey (1971) has found that the quantity (measured by the number of past and present club memberships) and quality (independent self-report, peer and teacher ratings of popularity and leadership roles) of social participation facilitates the development of preadolescents' moral judgement. Hence both the low peer popularity (Bryan, 1974b) and the qualitative difference of the LD child's interpersonal relationships, as compared to normal controls (Bryan, 1974a) may debilitate his moral growth. This is likely to effect moral judgement via role taking skills which are directly, though not necessarily linearly, related to social interaction (Hollos & Cowan, 1973; West, 1974). Conceptual analysis also supports this viewpoint as taking alternate and reciprocal roles is the sine qua non of adequate peer interaction. To do this, however, requires normal language development for the communication of relevant thoughts and feelings, but, as previously noted, the greatest

number of learning disabilities involve language disorders. Such role taking skills would, by definition, also be impaired in the child with a nonverbal learning disability.

Even the LD child's home environment does not foster the development of such skills. Wetter (1970) for example, discovered the mothers of LD children are less accepting and more rejecting than those of normals, a particularly important finding in view of Hoffman's (1963, 1970) emphasis on parental affection for moral development. As siblings adopt the parents' attitude to the disabled child (Telford & Sawrey, 1972), it would seem the whole family milieu mitigates against the LD child's moral development. In terms of moral judgement, Holstein (1968) has shown this variable is directly related to parents encouraging their children to participate in discussions, a factor likely to increase role taking opportunities. The maternal rejection of LD children is antithetic to such stimulation.

It is not unexpected, in view of such considerations, to find that learning disabilities have been associated with delinquency (Poremba, 1967, 1975). This factor is perhaps the most direct link between moral judgement and learning disabilities, as delinquents tend to exhibit inadequate moral judgement (Fodor, 1972; Hickey, 1972; Kohlberg, 1964). The connection between delinquency and learning disabilities originated via clinical observations made in the juvenile court but has more recently been explored by research workers. For example, Elliot and Voss (1974) have shown in their multifactorial study that early school failure is the single most important variable in predicting later delinquency. Studies demonstrating a high percentage of LD children in delinquent populations (Berman, 1974; Critchley, 1964; Tarnopol, 1969) support more directly theoretical attempts to connect these two areas (Brutten, Richardson &

Mangel, 1973; Mauser, 1974; Poremba, 1967, 1975).

One of the arguments for such a link is that delinquent recidivism is mounting, despite increasing psychiatric intervention. This suggests that an intrapsychic approach may not be as relevant as remedial education. Learning disability specialists, always quick to answer remedial needs, have begun to suggest educational techniques suitable for rehabilitating these children (Poremba, 1975). The obvious need for moral education is however, marked by its absence. Indeed, the lack of research or mere mention given to the LD child's moral development is even more surprising as it has been argued in the present chapter that several LD symptoms may impair moral judgement.

The concern with moral judgement may be questioned as it appears that the most direct link between learning disabilities and moral development is in terms of behaviour. Notwithstanding this objection it is apparent that one must be able to reason morally before one can act morally and hence moral judgement is logically prior to moral behaviour. As Kohlberg (1969, p. 374) states " ... once moral judgement development is understood, the development of moral action and moral affect becomes much more intelligible and predictable". It is for this reason that the present study addresses itself not to moral behaviour, but to an as yet unexplored area of learning disabilities, moral judgement.

The purpose of this chapter has been to explore the effect of various LD symptoms on cognitive processes and social skills. It was intended to thereby integrate the present review of learning disabilities with the material presented in chapter two on the cognitive developmental approach to moral development and to justify the choice of LD children in the present study, a factor directly attacked in the last section. In order to place this argument in perspective,

however, the chapter opened with a discussion of conceptual issues in the field of learning disabilities which revealed the tentative nature of knowledge in this area of special education.

CHAPTER 4

Empirical Findings

The present chapter reviews research in both normal and exceptional children regarding the integrities necessary for moral judgement development and hence serves to integrate the material presented in the preceding two chapters. As discussed in chapter two, the development of moral judgement is held by cognitive developmental theorists, such as Piaget (1932) and Kohlberg (1971), to depend on changing cognitive structures and social environmental factors. Only findings relating to these two variables will be discussed. Moreover, as the present study stems, both conceptually and methodologically more directly from Kohlberg's theory, a bias towards investigations conducted within this framework will be evident.

Despite the narrowly defined area to be reviewed the comparability of findings is open to question owing to the crude assessment instrument used in this area. This is hardly surprising as, Magowan and Lee (1970, p. 536) point out that,

> "the attention devoted by psychologists to the refinement of instruments for the measurement of moral maturity has been sparse indeed when compared with other branches of psychometry".

Many studies use Kohlberg's assessment technique which, as pointed out in discussing his work (see section 2.1), is not without difficulty. First, his method is highly esoteric and remains unpublished. Much research is therefore conducted by experimenters who are untrained in this technique or who have learnt it second or third hand. Consequently, no standardised practice is followed in interviewing subjects with both the number and content of questions varying from one dilemma to another and from one experimenter to another. Secondly,

scoring systems vary as Kohlberg is continually revising his instrument. Both sentence and story aspect scoringare still used in some studies despite the newer intuitive issue scoring technique. However, as the latter is reliable only "in the hands of thoroughly trained or experienced scorers" who have had "personal teaching and supervised experience" (Kohlberg, 1976a, p. 45) some researchers use Kohlberg's standardised issue scoring system. The failure of many investigators to report the exact scoring technique used makes it difficult to know whether inter-study comparison on this criterion alone is valid. Furthermore, the use of global stage scores as well as moral maturity scores which vary from 100 (if all responses are stage 1) to 600 (if all responses are stage 6) introduces further variability between studies. Thirdly, inter-dilemma comparison is difficult as each samples different issues to differing degrees, a factor which may account for the discrepancy in the number and nature of questions following each dilemma. In addition, dilemmas vary as some are unrealistic while others are appreciably more realistic. In terms of projective theory unrealistic dilemmas may allow individuals to more freely project and hence be preferable. Conversely, realistic dilemmas may be taken more seriously thereby capturing the richness of the subject's response. Although there is no research investigating the relative efficacy of these two types of dilemma the failure of investigators to specify the actual stories they used again questions the comparability of research findings. Finally, the carte blanche use of Kohlberg's dilemmas with young children is open to question. Little attempt has been made to adapt these stories and it is therefore quite possible that they may measure factors such as language development rather than moral judgement.

Despite these difficulties with Kohlberg's assessment technique it appears

preferable to Piaget's dual story method which has been found to measure moral content and performance variables such as memory (Lickona, 1976b). In addition, Kohlberg's instrument has been a cohesive force in research on moral judgement development as will become apparent in the ensuing review.

4.1 Cognitive Processes and Moral Judgement

Initial support for the view that moral judgement is anchored to general cognitive functioning is suggested by the well-documented relationships between IQ and Piaget's dimensions of morality (Abel, 1941; Boehm, 1962; Durkin, 1959; Johnson, 1962; Mac Rae, 1954) and the moderate correlations obtained with Kohlberg's stages (Keasey, 1971; Kohlberg, 1958). Further studies show that with mental age controlled differences in moral judgement disappear (Blakey, 1973; Boehm, 1967; Krebs, 1965).

The problem with such evidence is that IQ is an inadequate measure of cognitive functioning in the context of both Piaget's and Kohlberg's theories and is therefore inappropriate for testing the posited parallelism between logical and moral progress. At best it measures Piagetian logical operations only indirectly and conceptually is based on a model of intelligence which is not predictive of qualitatively different modes of moral reasoning. The correlation between IQ and moral judgement can therefore only lead to the claim that children with higher IQs move faster through Piaget's or Kohlberg's stages. Consequently, Kohlberg and Gilligan (1971) present a model in which various Piagetian stages are prerequisites for corresponding moral stages. More specifically, the consolidation of concrete operations is seen as a necessary condition for Kohlberg's stage 2 while formal operations constitute the basis for principled moral reasoning (stages 5 & 6).

Subsequent research generally supports this model. For example, Tomlinson-Keasey and Keasey (1974) and Langford and George (1975) obtained results confirming the latter relationship. More relevant to the present study, however, is evidence relating to the postulated necessity of concrete operations for the naive instrumental hedonism of stage 2. Keasey and Weston (1973) are the only researchers who have specifically addressed themselves to this question. They presented their subjects (20 randomly selected 7- and 9-year-olds, half boys and half girls) with five Kohlberg dilemmas, classification and conservation tasks. All 15 children at stage 2 were found to be concrete operational. In contrast, seven concrete operational subjects did not display stage 2 reasoning. Combining these facts Keasey and Weston (1973) suggested that operational thought is a necessary, but not sufficient condition for the transition to stage , an hypothesis they tested more appropriately in a second study. One year after initial testing, the same moral and cognitive measures were readministered to 12 children who had evidenced neither concrete operational nor stage 2 reasoning. Of the 10 children who attained operational thought, seven also changed moral stages, while the two pre-operational 7-year-olds still remained at stage 1. It thus appears that there is a decalage in the emergence of reversible thinking as applied to physical and moral content.

Damon (1975), however, found no supporting evidence for this viewpoint with regard to developing conceptions of justice, the core element of Piaget's and Kohlberg's stages. He explains the strong association found between levels of justice and mathematical-physical reasoning in terms of the synchronous emergence of corresponding justice and logical levels in the majority of his sample. Thus contrary to Keasey and Weston's (1973) finding that logical

structures appear first in physical, and only later in social concepts, Damon's (1975) results suggest the converse is conceivable. It is possible to imagine a condition where repeated school failure (cf.the learning disabled) leads to emotional arousal which may in turn impair reasoning in respect to physical concepts. Consequently, social reciprocity could conceivably emerge before reciprocity in the physical domain. In the present context, if LD children displayed adequate role taking or moral judgement but impaired conservation ability this would support the above view and have serious implications for the cognitive developmental approach to moral judgement.

Prima facie, another of Keasey and Weston's (1973) findings appears anomalous. They noticed a different pattern in the correlations of concrete operations and moral judgement in their 7 - (classification, 43; conservation of mass, 69; weight, 46;and volume, 48) and 9 - year - olds (classification, 32; conservation of weight - ,03; and volume - ,02). Accordingly, Keasey (1975) suggests a specific-dependent model of the cognitive-moral judgement relationship as 9 - year - olds, it is argued, are not undergoing any major cognitive transformation. His model is consistent with Kohlberg's and sees moral growth as dependent on specific changes in cognitive development. Lee (1971) however, has found a general correlation between six Piagetian tasks and Kohlberg type measures of moral judgement (average r — 49) . In contrast to Keasey (1.) she therefore postulates the concomitant growth of cognitive development and moral judgement, a viewpoint closely allied to Piaget's theory.

This disparity is,however, more apparent than real,as Lee also found that an increase in certain moral responses (e.g., peer versus authority type responses) was associated with the development of concrete operations, whereas an increase of other moral responses (e.g., societal order considerations)

was related to the emergence of formal operations. Furthermore, with age partialled out the moral-cognitive correlation decreased (average r = .33). Despite her attempt to control age, even Lee admits the possibility that this may be the main variable accounting for the relationship.

Keasey's (1975) development of Kohlberg's theory thus appears to be essentially correct as the necessity but insufficiency of certain cognitive operations for moral judgement development remains to be disproved. Perhaps the relationship of cognitive growth to moral judgement is most easily seen in a study by Epstein (1975). As soon as children understood that changing a rule is different from violating it, they allowed rule change. Hence cognitive immaturity appeared to be the source of the young child's inflexibility with regard to rules. In sum, it is apparent that empirical research substantiates the role of cognitive factors in the development of moral judgement. There is no evidence to dispute such a relationship although findings tend to favour Kohlberg's model rather than Piaget's contention of mere concommitant development.

4.2 Social Skills and Moral Judgement

Research associating general social development to moral growth is not reported in the present section as it is argued that the relationship to moral judgement is via its effect on role taking ability. However, studies concerning the influence of the peer group will be briefly considered owing to the role accorded to it by Piaget and the fact that even in terms of his theory this influence can be interpreted as role taking opportunity.

Data relating to the impact of peers on moral judgement is mixed. Several findings do not support Piaget's hypothesised relationship (Kugelmass & Breznitz, 1967; Krebs, 1965; Porteus & Johnson 1965). In fact, Lerner (1937) and Devereux (1970) even concluded that peers may have a negative effect on

moral growth when, for example, peer opinion runs counter to mature moral reasoning. On the positive side there is behavioural evidence supporting Piaget's view (Ugurel-Semin, 1952; Einhorn, 1971). Nass (1964) has even suggested that the purpoted peer solidarity of congenitally deaf children accounts for their earlier independence of adult influences in moral judgements.

A possible interpretation of this contradictory evidence is offered by Lickona (1976b) who suggests that Piaget's moral dimensions are not sensitive to variations in peer experience whereas Kohlberg's dilemmas are. Consequently, peer popularity has been related to moral advancement on Kohlberg's hierarchy (Keasey, 1971; Kohlberg, 1971) although research conducted within such a framework tends to focus more on role taking ability as a determinant of moral judgement. Such an emphasis is consistent with Piaget's theory when one remembers that Piaget emphasised the peer group only to the extent that it offered reciprocal social interaction. As Piaget (1932, p. 137) explains, giving the child "a feeling of equality" is the all-important facilitator of moral growth. Accordingly, research on role taking, is also noteworthy in terms of Piaget's theory.

Studies relating moral judgement to role taking can be viewed in cognitive terms as the ability to consider another's point of view as both distinct from and yet related to and contingent on one's own, reflects intelligence - it is the crux of social intelligence (Mead, 1934). Unlike theorising relating cognitive and moral growth though, neither Piaget nor Kohlberg differentiate levels of perspective taking nor do they show how particular stages of moral judgement could be based on particular role taking skills. Recently, however, Kohlberg (1976a) has explicitly defined moral judgement development as a gradual evolution of role taking abilities. This development crystallises one line of research on

role taking which does not see the necessity of empirically correlating it to moral judgement as these variables are considered related by definition. Hence Moir (1974) for instance, in showing that various role taking tasks account for a significant portion of the variance in moral judgement scores, is really interested in the relative ease with which role taking is applied to moral and nonmoral areas. He therefore suggests a structure d'ensemble interpretation of role taking skills pointing to the importance of factors responsible for determining role taking development. Significantly, in the present context, Moir (1974) found that with intelligence partialled out, age and socio-economic status controlled, the relationship between role taking and moral judgement remained significant.

Although not strictly comparable, this finding is inconsistent with Selman's (1971) results where the relationship held only for the middle range of trichotomized IQ scores. In contrast to Moir, Selman does not define moral judgement in terms of role taking but seeks to establish an empirical relationship between these two variables. More specifically, Selman postulated and found that an understanding of reciprocal interpersonal relations was a necessary condition for conventional (stage 3) moral reasoning. Using 20 8 - 9 - and 10 - year - olds (10 boys and 10 girls in each group) Selman demonstrated that with age partialled out the relation of role taking to moral judgement remained significant. However, as lower and higher trichotomised IQ groups showed no relationship on these two experimental variables Selman suggests mental age may be a crucial factor in determining the emergence of role taking skills in moral judgement. Although this appears inconsistent with Moir's (1974) result it may not be owing to Selman's inappropriate methodology. Selman draws his conclusion on the basis of 2 x 2 $\underline{X}^2$ analyses comprising 20 subjects. In terms

of the assumptions needed to accurately approximate a χ^2 distribution (Siegal, 1956, pp. 104 - 111) this does not allow the variable under consideration to work in favour of independence. In fact consultation of Selman's doctoral thesis (1969) on which this study is based, revealed that there were normally one or more cells in his four-fold contingency tables with expected frequencies of less than one. Thus Selman's investigation of age and intelligence can be seriously questioned.

However, a study by Ambron and Irwin (1975) which adequately partialled out IQ, supports the relationship of role taking to moral judgement found in Moir's (1974) and Selman's (1971) studies. This investigation not only showed a significant relationship between role taking and moral judgement but also demonstrated that this held for different dimensions of role taking (perceptual, cognitive and affective) and moral judgement (intentionality and restitution). That Selman's (1971) inadequate control of intelligence and age may not have effected his main results is also suggested by a longitudinal study of his subjects. Ten children who had previously scored poorly on role taking and moral judgement measures were retested a year after the initial study. The only two children who had attained conventional moral reasoning also displayed reciprocal role taking ability, in contrast to several other children who had achieved the latter but not the former. Selman (1971) therefore concluded that reciprocal role taking is a necessary but not sufficient condition for stage 3 reasoning which is partially supported by Hickey's (1972) finding that the moral reasoning of delinquents was inferior to their role taking ability.

In conjunction with Damon (Selman & Damon, 1975), Selman has extended this viewpoint by positing a parallel between his structural analysis of role taking development (Selman & Byrne, 1974) and corresponding justice concepts.

This belies Selman's (1976) most recent suggestion that an ego-development grid be constructed with content areas (physical, logical and social domains) and developmental stages constituting the horizontal and vertical axes respectively. At each stage a common structural unity would then connect different content areas.

Such a model is implicit in research attempting to relate decentration in different areas to moral judgement. For example, Stuart (1967) administered measures of lateral discrimination, perceptual and social decentration and found that they related to immanent justice, expiatory punishment and objective responsibility. Similarly, Rubin and Schneider (1973) have related performance on tasks of egocentrism (communication and altruism) to levels of moral judgement as measured by Lee's (1971) moral dilemmas, an adaptation of which are used in the present study. Although this finding is consistent with the literature, the use of moral judgement scores as a quantitative variable in this study can be challenged. Accordingly, Fincham (1976b) used Lee's (1971) stories to dichotomise a sample of 42 children into those high and low in moral judgement. Administering liquid conservation and role taking tasks it was found that both variables were significantly related to high but not low moral judgement levels which is consistent with cognitive developmental theory.

It thus appears that most research findings support the postulated role of cognitive processes and role taking in moral judgement development. Further evidence relating to this question will be discussed in reviewing studies on the moral judgement of exceptional populations.

4.3. Moral Judgement in Exceptional Populations

The investigation of moral judgement in a population which may be impaired in cognitive and social development, the converse approach to that above, has

not proved popular. In fact, there appears to be a paucity of research on moral judgement in exceptional children, an observation confirmed by both Hoffman* and Lickona**. Moreover, few of the existing studies are directly related to the issues under consideration. A possible exception is the investigation of moral judgement in mentally retarded children (Abel, 1941; Blakey, 1973; Boehm, 1967) in particular the longitudinal study conducted at Temple University (Mahoney & Stephens, 1974; Mc Laughlin & Stephens, 1974; Stephens, 1972, 1974, Stephens, Miller, & Mc Laughlin, 1969). In the latter, Piagetian reasoning, moral judgement and moral conduct tasks were readministered to 75 retardates (IQ = 50 - 75) and 75 normal controls (IQ = 90 - 110) after a two-year interval. This yielded a wealth of information, selected portions of which will be considered in the present context.

It was found in phase one of this study (Stephens, et al., 1969) that retardates differed significantly from control subjects on all but two of the 22 moral judgement measures. This result suggests the importance of MA for moral judgement but is contra-indicated by analysis of phase two data (Stephens, 1972). When MA and CA were statistically controlled by analysis of covariance the performance of normal controls still exceeded that of the retardates. Although prima facie inconsistent with the posited relationship between cognitive and moral growth this result, when seen in context, provides partial support for the cognitive developmental viewpoint. Factor analysis of the reasoning tasks did not yield a single factor which was jointly defined by Piagetian and standard intelligence scores. It is quite possible that Piagetian cognitive skills thus account for the difference in moral judgement as the two groups differed on 17 of these 29 reasoning measures, notably categorisation, flexibility and reversibility all of which characterise

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* Personal Communication, June 16th, 1976.

** Personal Communication, September 5th, 1976.

operational thought. This possibility is further supported by the emergence of several additional factors defined by reasoning and moral judgement in phase two.

However, the use of these quantitative and factor analytic statistics in analysing what is basically qualitative, stage - structural data has been questioned (Kohlberg, 1974). Such techniques are, in addition, unsuited to testing specific relations between moral judgement and cognitive stages. To do so in this particular study would, in any event have proved difficult as longitudinal findings showed the moral judgement measures did not define structural stages (normals improved on some but not other measures of the same variable) nor a developmental sequence (retardates regressed in three clumsiness and stealing stories). The inadequacy of these measures is further demonstrated by the near optimum performance of retardates and normals on tasks which did not differentiate the two groups. In view of these considerations the moral judgement tasks do not appear to warrant longitudinal study nor the detailed analysis performed on them. These criticisms furthermore reflect the nature of this study which seems to be a data-based exploration of various abilities and their development in the mentally retarded rather than an investigation of any particular developmental theory.

In contrast, Taylor and Achenbach (1975) used MA matched retardates and normals to specifically test the cognitive developmental postulate that older individuals are more advanced in moral judgement than younger ones equated for cognitive capacity (Kohlberg & Gilligan, 1971). As this study is more closely related to the present than any other, it will be considered in detail.

Thirty cultural-familial retardates and 30 nonretarded children were tested on four Kohlberg dilemmas and several, what the authors term 'cognitive' tasks,

namely, categorical classification, awareness of quantitative and qualitative invariance, conceptual reciprocity, a perceptual and two cognitive role taking tasks. An analysis of variance revealed that moral reasoning increased with MA which indirectly supports cognitive developmental theory although, like the above study, qualitative variables were measured in quantitative terms. In addition this analysis showed that MA matched groups did not differ in terms of moral judgement, a finding which concurs with the cognitive developmental viewpoint as retardates and normals performed equally well on the cognitive and role taking tasks. Further analysis in fact revealed that stage 2 moral reasoning was significantly related to quantitative invariance and logical seriation (as categorical classification, quantitative invariance, and conceptual reciprocity measures proved to be inadequate they were excluded from the analysis). However, this relationship could be due to MA in view of its earlier mentioned influence on moral judgement. Taylor and Achenbach therefore attempt to partial out MA but in doing so, reveal their methodological expendience.

Having first used quantitative scores in comparing the two groups on moral judgement (they claim in their discussion to have compared the group in terms of stages yet nowhere in their results section do they do so), they then correctly use categorical stage data to investigate the relationship of cognitive and moral variables. In partialling out MA, by using MA pairs discordant on the particular cognitive tasks, they once again compare moral judgement performance in quantitative terms. These quantitative scores though reflect intra - as well as inter-stage differences and are thus inadequate to test the cognitive-moral judgement relationship. Taylor and Achenbach's (1975, p. 49) conclusion that, "the primary relationship between moral judgement and cognitive development

was accounted for by general MA, rather than by specific cognitive operations" is spurious to say the least. One cannot expediently fluctuate from parametric paradise to structural developmental domain without seriously jeopardising the validity of one's findings.

Perhaps this shortcoming is one of ignorance rather than malice for even when correctly analysed this study unfortunately yields little information on the relation of cognitive and role taking variables to moral judgement. First, the data is limited to pre-moral reasoning (stages 1 and 2). In terms of Selman's (1971) earlier cited result one would not expect reciprocal role taking to define the transition between these two stages. Secondly, retarded and normal groups were combined in analysing the relationship of cognitive and role taking measures to moral judgement. While the two groups were indistinguishable on the former they may have differed on other important variables influencing moral judgement. Hence the relationships found are open to question.

The lack of conceptual understanding and the gross methodological flaws of Taylor and Achenbach's (1975) study are indicative of research on moral judgement in the mentally retarded. It appears that this work is analogous to the quality of that existing in the field of learning disabilities and is therefore of limited value as a test of cognitive developmental theory.

Delinquency, another area of exceptionality which has been investigated in respect to moral judgement,displays greater methodological sophistication but is similarly limited. This possibly results from the almost exclusive focus in this area - the attempt to relate moral judgement to behaviour and to provide intervention programmes which improve moral judgement and behaviour (Fodor, 1972; Holt, Hobbs & Hankins, 1976; Prentice, 1972; Sarason & Ganzer 1973). Few studies exist which actually show impaired moral reasoning in

delinquents an assumption implicit in the above emphasis. This also appears surprising in view of Ruma and Mosher's (1967) demonstrated relationship between guilt and moral judgement as self critical guilt responses develop late in delinquents (Bandura & Walters, 1959, Mc Cord & Mc Cord, 1956). It is quite possible therefore that delinquency may result from amoral or lower level moral reasoning. Initial support for this viewpoint was obtained in Kohlberg's (1958) doctoral study. Twenty-four severe delinquents were found to consistently display pre-moral judgements and thus differed significantly from matched controls. More recently, Fodor (1972) and Hickey (1972) have confirmed this result using larger delinquent samples.

Despite these findings there has been little attempt to determine the factors responsible for low level moral reasoning in delinquents, an unexpected omission in view of intervention programmes attempting to facilitate moral growth. One such factor could be intellectual impairment as Shuey (1966) has found the average IQ of delinquents is lower than that of the general population. Consequently, Miller, Zumoff and Stephen's (1974) investigated the reasoning skills and moral judgement ability of mentally retarded (M IQ = 71), delinquent (M IQ = 88) and normal (M IQ = 102) adolescent girls. Although an analysis of covariance revealed arrestations in the delinquent's cognitive functioning, as measured by conservation and classification tasks, this finding cannot be used to support the above viewpoint as these girls also displayed adequate moral reasoning. Prima facie, this result, together with the fact that neither measures of IQ, academic achievement nor reasoning significantly correlated with moral judgement, serioasly questions cognitive developmental theories of moral judgement. However, as these investigators administered identical tasks to those used in the Temple project and also analysed their results similarly,

they are subject to the same criticisms levelled at that study. In addition, boys outnumber girls in the delinquent population by a ratio of 4:1 (Poremba, 1975) and thus the atypical female sample might also account for the anomalous moral judgement results. Although Miller et al.'s (1974) findings are inconsistent with the cognitive developmental approach and previous studies on delinquency, in view of the above criticisms,their results require replication before they can be seen as a challenge to research in these fields. Nevertheless, this study is noteworthy in the present context as retardates were superior to delinquents on academic performance tests which suggests that the latter group may have been learning disabled.

Apart from these studies on delinquency and mental retardation no other area of exceptionality has attracted much research on moral judgement. This is not to suggest that there are no studies in such fields but rather that they exist in isolation. For example, aphasic children appear to display adequate moral judgement (Barry, 1974), the gifted,as perhaps expected, tend to be advanced in moral reasoning (Mac Rae, 1954; Boehm, 1962), while deaf children have been found superior on one dimension (independence of adult influence) of moral judgement but inferior on another (intent versus consequences) when compared to their hearing counterparts (Nass, 1964). These results form an undersized patchwork quilt of knowledge the value of which is open to question.

Of particular interest in the present context is the total lack of research investigating moral judgement in LD children. However Berger, Prentice, Hollenberg, Korstvedt and Sperry's (1969) study on the development of causal thinking in severe LD children is indirectly related to this issue. The fact that their LD sample utilised developmentally less mature concepts of causality is significant for two reasons. First, their measures of interpersonal causality

included two modified versions of Piaget's immanent justice stories. Secondly, both causal and moral reasoning have been found to be related to decentration ability (Fincham, 1976b; Rubin & Schneider, 1973; Stuart, 1967). Although this study therefore suggests impaired moral reasoning in the learning disabled, a follow-up investigation revealed that the gap between normal and LD groups had decreased considerably which, together with the small number (N = 11) and severly disturbed nature of their subjects suggests these results be treated as tentative rather than conclusive.

Despite methodological weaknesses in individual studies it appears that empirical findings generally support Piaget's and Kohlberg's theories. To date there is no substantial evidence disputing the postulated relation of cognitive processes and role taking to moral judgement in both normal and exceptional populations. More specifically, the impact of concrete operations and reciprocal role taking on the development of moral judgement has been verified. However, there has been little attempt to investigate moral judgement in a population where these integrities may be impaired. Such an investigation would test the cognitive developmental approach to moral development as well as provide information in a specific area of exceptionality. The performance of LD children and normal achievers on conservation, cognitive role taking and moral judgement tasks was therefore investigated in the present study.

CHAPTER 5

General Plan of the Study

The cognitive developmental approach to moral development was investigated in the present study by administering several tasks to a deviant and a control group of children. More specifically, LD children were compared to normal achievers on conservation, cognitive role taking and moral judgement measures. In the present chapter the design of the study will be outlined followed by a description of the subjects, test instruments and general procedures that were used. Specific details of each area investigated are contained in chapter six.

5.1 Design

It was planned to use a random selection technique to equate a group of normal achievers with a sample of preselected LD children who fulfilled the age, sex, IQ and socio-economic criteria adopted in the present study. A randomisation procedure was chosen in preference to a matched pairs design for several reasons. First, as Campbell and Stanley (1963, p. 176) note, individual matching has been "greatly oversold and it is more often a source of mistaken inference than a help to a valid inference". Secondly, it is unsound to equate groups by matching subjects when their population means may differ because if the dependent variable does not correlate perfectly with the matching variable, regression occurs unequally for the two groups (Hallahan, 1975). Thirdly, individual matching is often cumbersome and involves a wastage of subjects. Fourthly, matching requires the assumption of a substantial correlation between dependent and matching variables. Finally, a matched pairs design combined with the categorical data yielded in the present study would have resulted in severe statistical limitations.

Despite the random selection of subjects the two groups utilised in this study are not totally independent as normal achievers were chosen from a socio-economic, sex, age and IQ range defined by the LD sample. Thus it could possibly be argued that the groups are matched although, as Kerlinger (1973, chapter 21) points out, there are no absolute criteria for deciding when groups are correlated. The importance of resolving this issue is emphasised by the fact that when matching is used an appropriate statistical test is required or else the control introduced by this technique is lost. This is to be expected as tests for independent groups compare each subject in one group to all those in the other,whereas,techniques for matched groups embody restricted comparisons between individual sets of matched pairs. Not suprisingly therefore both Kerlinger (1973, p.310) and Siegel (1956, pp.61-62) talk of matching when referring to pairs of subjects thus implicitly restricting the use of these tests to designs where individual subjects have been equated on control variables. In the present study no attempt was made to match pairs of subjects and hence it was considered more appropriate to treat the samples as independent groups.

Following the selection of subjects each child was tested by the author on conservation, role taking and moral judgement tasks. In view of the nature of the data yielded by these tests, the small number of subjects tested (N = 56) and Kohlberg's (1974) criticism regarding the quantitative analysis of structural-developmental data,it was decided to use Exact Tests for the 2 x 2 (Siegel, 1956, pp.96-104) and 2 x 3 (Maxwell, 1967, pp.46-50) contingency tables yielded by the conservation and role taking/moral judgement tasks respectively. As no directional hypotheses were stated all tests were two-tailed while the .05 level of significance was adopted throughout the study.

In order to evaluate the linguistic complexity of the moral judgement

stories as well as the clarity of instructions used for each task a pilot study was conducted. Because the number of LD children suitable as subjects for the main study was limited, the materials were piloted on eight institutionalised children. This sample was considered particularly appropriate as impaired language development is a characteristic shared by both institutionalised (Hetherington & Parke, 1975) and LD children (Mc Grady, 1968).

5.2. Subjects

Fifty-six, English-speaking, white, South African boys (8- and 9-year-olds) from middle and upper-class homes, with a range of 90 to 124 IQ points were selected as subjects. The experimental group consisted of 28 LD children. Owing to the restricted age-range sampled, it was necessary to draw these Ss from two Johannesburg remedial schools. All these children,however, had been diagnosed as learning disabled on an extensive battery of psychological and educational tests by a multidisciplinary team. As the personal files of these children were strictly confidential no attempt could be made to select a sample homogeneous in terms of the nature,severity or etiology of their learning disabilities. However, all Ss in this group experienced difficulty with academic tasks despite an average or above-average IQ. Consequently,they had been removed from their normal schools and were receiving full-time remedial education. The control group comprised 28 children from a private school in Johannesburg. In contrast to the experimental Ss, these children were achieving at an average to above-average level for their age and grade.

All Ss were selected according to sex and age. Only males were used in the present study as they constitute 70 percent of exceptional children (Mumpower, 1970). In the LD population this ratio is even higher as males typically outnumber females by four or five to one (Critchley, 1971; Mumpower,

1970). It was therefore decided that an exclusively male sample would be more representative of the LD population and accord with most published studies which use only males Ss.

Although it is often assumed that middle childhood is a period of relative quiet, 8- and 9-year-olds were used in this study. This age-range was selected as it appears to be an important one for all the variables under investigation. For example, Flavell, Botkin, Fry, Wright and Jarvis (1968) obtained role taking data to show that major developmental reorganisations take place in this process between 8 and 10 years of age. It is also during this period that children pass from Kohlberg's stage 1 to stage 2 moral reasoning, and when, in terms of Piaget's theory, the priority of moral autonomy and equality over authority is most marked. With regard to operational thought Piaget maintains that this period is more stable than the preceeding 6 to 8 year intuitive stage where thought vascillates between the criterion of perceptual appearance and abstract reasoning. Insofar as the intention of this study is to investigate whether certain concepts are present in the LD child, it appears more appropriate to used an age group where these concepts ought to have stabilised in normal children. Any difference found should therefore be genuine rather than an artifact of the specific age-range sampled.

An additional consideration in the use of this age group is that it not only allows cognitive operations to stabilise but also gives them time to manifest in the domain of moral judgement. Perhaps more important than the above mentioned considerations though is language development, as Chomsky (1969) points out the 5-year-old's syntax differs from an adults in several significant aspects. One of these is the syntactic structure associated with the word 'promise', a concept which is used in three of the present moral judgement

stories. Although all children only master this construction at nine years, as Chomsky (1970) notes, failure to do so after seven years is exceptional. Language development is also important in terms of conservation as children under seven years interpret concepts such as 'bigger', 'more' and 'same' differently to adults. In view of such factors 8- and 9-year-olds were considered most suitable for the present study.

In addition to homogeneity in terms of sex and age, the control and experimental groups were also equated on the variables of IQ and socio-economic status. IQ was controlled as it has been shown to correlate significantly with moral judgement (Boehm, 1962; Keasey, 1971), conservation (Bat-Haee, Mehryar & Sabharwah, 1972; Elkind, 1961; Goldschmid, 1967; Hathaway, 1972) and role taking (Moir, 1974; Selman, 1971). As socio-economic status is also related to performance on these experimental variables (see e.g., Boehm, 1962; Hertzig, 1971; Kohlberg, 1971) normal achievers were selected from a private school paying comparable fees and situated in a similar socio-economic area to the two remedial schools.

In sum, the learning disabled (LD) and normal achieving (NA) samples were equated in terms of sex (male), age (LD - M = 109,12 months, SD = 7,86; NA - M = 108,60 months, SD = 7,97), IQ (LD - M = 107,12, SD = 9,21; NA - M = 110,07; SD = 8,33) and socio-economic status (middle and upper class).

5,3 Instruments

The New South African Group Test - Junior K (1965) comprising three verbal and three nonverbal subtests served as a measure of intelligence. This test was chosen as it was specifically constructed for use with South African children.

5.3.1 Conservation of Liquid

Liquid conservation tasks served as a measure of concrete operational thought as this is neither the first nor last conservation to appear in the child's repertoire. It is perhaps for this reason that it is so widely used in the literature. Despite this fact there is no universally-accepted testing procedure as the methods used to assess the acquisition of this concept vary according to the needs of each particular study. However, as language, contextual and scoring criteria effect the results gained from conservation tasks (Griffiths, Shantz & Siegel, 1967; Gruen, 1966; Rose & Blank, 1974) it is therefore necessary to detail the nature of the measure used in the present investigation.

The conservation test is similar to those developed by Etuk (1967), Otaala (1971) and, more particularly, Meltzer (1976). A feature of this task is its attempt to meet Tuddenham's (1971) criticisms of Piagetian techniques and the shortcomings of Bruner's method outlined by Piaget (1967). Hence the procedure was characterised by: a standard questioning technique (to control variability in responses introduced by verbalisation); the use, where possible, of questions requiring only monosyllabic responses (to control for subjective classification of answers when scoring); variation in the phrasing of similar questions and the patterns of 'yes' and 'no' answers required (to ensure the Ss responses reflect a grasp of the concept rather than, for example, mental set); an orientation session before test administration (to avoid answers which merely result from uncertainty as to the use of key concepts such as 'more' or 'same' amount'); a test to establish whether Ss can carry out in the plane of action wh- they verbalise (to distinguish true-conservation from pseudo-conservation)

In sum, the conservation test used in the present study comprised three tasks designed to measure intensive, extensive and pseudo-conservation

abilities.

5.3.2 Cognitive Role Taking

A cognitive, rather than perceptual or affective, role taking task was used in the present study as it was considered to be more directly related to moral judgement. The particular measure adopted was specifically devised by Flavell and his collaborators (1968) to investigate the development of role taking in childhood. It has been successfully utilised by a number of researchers (e.g., Ambron & Irwin, 1975; Kurdek & Rodgon, 1975; Selman, 1971) and required no modification in the present context.

However, in constructing the illustrations for this task an attempt was made to avoid possible distraction by only including sufficient detail to maintain attention. In addition, the general instructions were made as concrete and as simple as possible. Finally, Selman's (1971) slight modification of Flavell et al.'s (1968) original scoring system was considered most appropriate for the age-range tested.

5.3.3 Moral Judgement

Although Piaget's methodology was specially designed to test the moral judgement of young children it was not used in the present study owing to the severe criticism levelled at it (Armsby, 1971; Kohlberg, 1969; Lickona, 1976b). Kohlberg's dilemmas, however, are not suited to use with young Ss and are definitely too complex for LD children. It was therefore decided to base the moral judgement measure on Lee's (1971) adaptation of Kohlberg's dilemmas. Confronted with a similar problem Lee maintained the essential elements of Kohlberg's method but generated short, concise stories comprehensible to younger Ss. Hence her dilemmas pose a conflict between two legitimate alternatives, require the S to resolve the problem and to verbalise the

underlying reasons for his resolution.

Even Lee's stories though, require fairly advanced language development, while some were considered too abstract for the present LD sample. As these stories reflect a counterbalancing of the different stages of moral development hypothesised by Piaget they were eminently suited to use with the present age-range. Accordingly, it was decided to adapt Lee's stories for use in the present study.

Three stories (one from each of the conflicts between authority-peer, authority-ideological and peer-ideological orientations) which were judged to be too distant from the child's phenomenological world were deleted. The six remaining stories could not, however, be used en bloc as they reflected cultural bias and required linguistic simplification. Altering the context of some stories was sufficient to overcome the former, but the latter posed a problem. To the extent that the developmental simplicity of language structures can be rationally appraised, the author, in conjunction with a linguist and a speech pathologist, attempted to simplify Lee's remaining stories. Idioms and lexical semantics considered to the extent that words or idioms unlikely to be understood, which lead to presuppositions or require complex syntactic structures (cf. 'sub-categorisation', Chomsky 1965) were avoided. Similarly, ambiguity resulting from the deletion of language elements was avoided and an attempt was made to keep meaning as explicit as possible in the sentence structures. Finally, the S was not required in later parts of the passage to infer knowledge from earlier sentence content.

Thus an attempt was made to linguistically simplify Lee's stories at the level of lexical, idiomatic, syntactic and sentence semantics, as well as discourse elements. In addition sets of four pictures were used to depict each

plot although care was taken not to include details other than those suggested by the story. The aim of these pictures was to lessen the demands made on memory and to aid comprehension by maintaining attention and focusing the Ss thinking in terms of the problems involved in the moral dilemma. A great deal of care was thus taken to ensure that the LD child's moral judgement was tapped rather than some performance variable.

5.4 Procedure

Initially the IQ scores of all Ss were obtained. Hence the New South African Group Test-Junior K (1965) was administered to two groups of normal achievers. However as LD children are unsetted to group testing, their IQ scores were based on individual tests administered in the process of diagnosing their problem.

All the Ss were then individually tested on the moral judgement, role taking and conservation measures by the author. Before testing began the E spent three to five minutes establishing rapport with the S. An attempt was made to minimise anxiety by telling the S that E worked in a factory producing games for children. The S was finally asked if he would like to help E by playing some of these games and saying whether he enjoyed them. This procedure was highly successful in motivating the Ss, if only by arousing their curiosity.

To maintain this non-threatening atmosphere E sat next to, rather than opposite, the S while administering each test. For both moral judgement and role taking tasks the illustrations for each item were placed on the table before S. The remaining cards remained stacked, face down, towards the edge of the table nearest E and out of the S's direct line of vision. For the conservation task E and S moved to another smaller table where the materials had previously been arranged by E.

During the role taking and conservation tasks E noted down S's responses

and later categorised them for scoring purposes. As the scoring of moral judgements is rather complex, the S's permission was obtained to tape-record his answers. To minimise anxiety only the microphone was visible. Contrary to expectation, however, most Ss were actually excited by this idea and the promise of hearing their voice at the end of the session seemed to keep them highly motivated in the experimental situation. As all Ss agreed to this procedure none of the qualitatively rich material necessary for the accurate scoring of moral dilemmas was lost in the present investigation.

The sequence of task presentation was random to control for possible order effects. Similarly, the sequence of stories in the moral judgement task was varied for the same reason. Finally, testing sessions fluctuated from 35 to 55 minutes as they were tailored to meet the individual needs of each S. The exact procedures followed during each session are detailed in the next chapter.

CHAPTER 6

Method and Results

The present chapter discusses the experiments designed to investigate the major aims of this study. It is therefore divided into three sections detailing the method used, as well as the results obtained in the cognitive, social and moral domains studied.

6.1 Conservation of Liquid

6.1.1 Method

6.1.1.2 Materials

red-coloured water
2 glass jars of the same size and shape (A1, A2)
1 wide wine glass (B)
3 identical small sherry glasses (C1, C2, C3)
2 square perspex containers (D1, D2)
1 pouring jug

6.1.1.3 Procedure

In order to specifically tap cognitive p. ocesses rather than language comprehension an orientation session, to check the S's understanding of crucial terms (e.g., 'more', 'less' and 'same amount'), preceded the three conservation tasks. Only if Ss responded correctly to these questions did E proceed with the first task. In the case of seven Ss (4 experimental, 3 control) who failed these check questions, E explained the concepts and readministered the orientation task. As all passed on the second trial it was unnecessary to exclude any of these Ss. The following tasks were then admininstered (see appendix C for detailed administration instructions).

Task A - (conservation of intensive quantity)

Two identical round jars (A_1 & A_2; diameter = 7 cm, height = 10 cm) were placed before S. The E then poured red coloured water into both beakers

until they were half full. E instructed S to say 'stop' when he considered the amount in the second equalled that in the first. Ss expressing scepticism with this result were allowed to adjust the amounts themselves until satisfied that they were equal. The water from A_1 was then poured into a wide wine glass (diameter = 9,5 cm). S was then asked whether the two containers held the same amount to drink (Qu. 1). If a negative answer was given E asked which glass contained more. A correct response however, was followed by asking the S which glass had more to drink (Qu. 2). This constituted a check on whether the previous answer had been guessed as S would contradict himself on this question if not fully conversant with the concept of conservation. Whether correct or not S was required to justify his response (Qu. 3). Finally, E poured the water back into A_1 and asked if A_1 and A_2 contained the same amount of liquid (Qu. 4).

Task B. - (conservation of extensive quantity)

Conservation of extensive quantity was assessed by utilising three identical sherry glasses in place of the wine glasses. The quantities in A_1 and A_2 were again adjusted until judged equal. E then poured the water from A_2 into the three smaller containers and asked the same questions as in task A.

Task C - (pseudo-conservation)

If S succeeded on either task A or task B, he was given a jug of water and asked to pour equal amounts into 2,5 x 2,5 x 15 cm and 3,75 x 3,75 x 15 cm square containers (D_1 & D_2). This conservation task tested whether S could carry out in action his verbalised thought processes, an ability considered by Piaget (1967) to be necessary for true-conservation.

6,1,1,4 Scoring

In tasks A and B scores were assigned for both behavioural and compre-

hension responses. 'Behavioural responses' refer to the S's judgements regarding the relative quantity of the two liquids,while the explanations given for these judgements constituted the 'comprehension' responses. To score on the former, Ss had to show they realised that the quantity of a liquid does not change despite a transformation in its appearance. Thus they were required to consistently assert the equality of the liquid although they were in different containers. A correct explanation had to reflect logical reasoning. Only responses invoking one of the following general rules thus obtained a full score: invariant quantity (reference to the original equality of the quantities); reversibility (mentioning the water could be returned to its original state by a reverse operation); compensation (recognising that variation in one dimension includes a reciprocal variation in another).

The S's total score for each task was obtained by summing behavioural and comprehension scores which were then converted to a 1-0, pass-fail, dichotomy. To pass, S had to obtain the maximum score for each task. A two category system was used as the few children normally classified 'transitional' tend to reflect chance success (Tuddenham, 1970).

Similarly, a 1-0 category was used for tack C. In order to score on this task S had to demonstrate that he understood the water level of a wide square beaker would be substantially lower than that of a narrow one containing the same quantity of liquid.

All the tasks were scored by the author. In the case of several responses considered to be ambiguous independent rating by an experienced Piagetian researcher took place. As there was inter-rater agreement on 94 per cent of these responses the author's original rating was utilised for all Ss in analysing the data (see appendix D for details of the scoring system used).

6.1.2 Results

The results obtained from the three tasks were analysed separately. Table 1 shows the number of Ss passing and failing each task in the LD sample and the group of normal achievers.

TABLE 1

Frequency of Pass-Fail Responses to the Three Conservation Tasks in the Normal Achieving and LD Groups

Groups	Conservation Tasks					
	Task A		Task B		Task C	
	Pass	Fail	Pass	Fail	Pass	Fail
Learning Disabled	23	5	22	6	18	10
Normal Achieving	19	9	22	5	17	11

Inspection of Table 1 reveals that the distribution of responses in the two samples is identical on task B. Furthermore, Fisher Exact Probability Tests showed that the normal achieving and LD groups did not differ on either task A ($p = .35$) or task C ($p = 1.00$) at the significance level adopted in the present study (.05).

6.2 Cognitive Role Taking

6.2.1 Method

6.2.1.1 Materials

7 pictures (26 cm x 21 cm) portraying a story sequence:
card 1: The boy is walking along a sidewalk, whistling and carrying a stick.

card 2: The boy looks frightened and drops his stick as he sees a large bulldog running towards him.
card 3: The boy runs, looking anxiously over his shoulder at the dog which is following close behind.
card 4: The boy is shown running with arms outstretched towards an apple tree. The dog is not shown and the boy's face (showing fear in the previous two pictures) is hidden by a branch of the tree.
card 5: The boy climbs the tree, with the dog nipping at his pants.
card 6: The boy is seated in the tree, eating an apple; the dog is nowhere in sight.
card 7: The boy is shown standing up in the tree. The dog can be seen across the street in the background. The boy's face shows no particular emotional expression.

6.2.1.2 Procedure

The E placed the seven-card sequence before S and asked him to tell a story about the pictures "like they do in the newspaper comics". This aspect of the task posed no problem and was successfully completed by all Ss. Three cards (numbers 2, 3 & 5) were then removed changing the theme of the story. The remaining four pictures show a boy first walking and then running to an apple tree, climbing it and eating an apple. Although the dog can be seen in the last picture it does not relate to the motivational theme of the story. The S can thus egocentrically incorporate the fear of dog motive into this four-card story.

The E then instructed S to imagine that his best friend had just come into the room and had been shown the four-card sequence. He was asked to relate the story he thought his friend would tell. In addition, he was questioned as to why his friend would think the boy climbed the tree and also what his friend would think the dog was doing in the last picture.

6.2.1.3 Scoring

A categorical scoring system reflecting qualitative differences in cognitive role taking was used. A score of 0 was given to Ss whose response indicated

an inability to transform the original story or where the angry dog remained a motive in the friend's predicted story. A score of 1 was assigned to the responses of Ss who related a perceptually correct four-card story but who were unable to maintain this perspective when questioned about the motivational conditions in the new story. The highest level of role taking skill was represented by a score of 2. Here the S successfully told the four-card story and suppressed the original seven-picture theme. On questioning, these Ss also showed that they understood the nature of the task; i.e., that their friend did not have any knowledge of the seven-card sequence and that this lack of information influenced the way he would tell the story. Ss scoring at this level thus showed an understanding of alternate viewpoints. As the scoring of this task is well standardised in the research literature it was not necessary to obtain an index of inter-rater reliability.

6.2.2 Results

The number of normal achieving and LD children responding in terms of each category is shown in table 2.

TABLE 2

Frequency of the Role Taking Categories

In the Normal Achieving and LD Groups

	Role Taking Category		
Group	0	1	2
Learning Disabled	12	8	8
Normal Achieving	11	7	10

To obtain the probability associated with this distribution an extension of the Fisher Test for 2 x 3 contingency tables was used (Maxwell, 1967, pp. 46-50). Results indicated that LD children and normal achievers did not differ in role taking ability as the probability obtained (p = .88) was not significant at the chosen cut-off level (.05).

6.3 Moral Judgement

6.3.1 Method

6.3.1.1 Materials

6 moral dilemmas; 2 stories representing each of the peer-authority, authority-ideological and peer-ideological conflict situations.
6 sets of 4 picture cards (30 cm x 20 cm) each set representing a story theme.
1 tape recorder.

6.3.1.2 Procedure

To introduce the moral dilemmas E told S that he was busy writing several stories for a children's picture book but did not know how to finish them. The S was then asked if he would like to help write the book by explaining how he thought the stories should end. The E then explained that he 'couldn't possibly' remember everything S said and asked if he could switch on a tape recorder.

A sequence of four cards illustrating a particular story theme was then placed before S. The E then narrated the story (see appendix F for actual stories) while at the same time pointing to the appropriate pictures. Each story ended by posing a conflict between two legitimate alternatives from which the child had to chose. Before posing the dilemma S had to recount the story, a check instituted to test memory and comprehension. If S encountered any difficulty the story was retold as many times as necessary for the theme to be fully understood. The S was then asked how the protagonist should resolve the

conflict. He was reassured that there were no right or wrong answers,the only important factor being what he truelly thought.

After the S's initial reply he was asked why he advocated his particular response. From this point on the method clinique was used in an attempt to uncover and explore the structure or form of the S's moral judgement.

6.3.1.3 Scoring

For scoring purposes the S's responses were transcribed from tape to written form. Each dilemma response was then independently rated according to Lee's (1971) scoring criteria (see appendix G). The reason for the S's solution was thus judged according to the following categories - (1) authority orientation (2) authority bound but emergence of reciprocity (3) reciprocity (4) rules for societal order (5) ideological.

To test the reliability of this system the author re-rated 40 randomly chosen dilemma responses eight weeks after initial scoring. Seventy-seven per cent agreement was obtained between the two sets of scores.

6.3.2 Results

As no Ss scored at level five and only one at level four these categories were not used in analysing the present data. Contingency tables using only the first three levels were thus constructed for each dilemma. Table 3 shows the freqrency of responses falling into these categories for both the normal achieving and LD samples. The exact probability associated with the 2 x 3 contingency table yielded by each story was calculated. It was found that none of the peer versus authority (A, $p = .43$; B, $p = .59$), authority versus ideological (A, $p = .08$; B, $p = 1.00$) or ideological versus peer (A, $p = 1.00$; B, $p = 1.00$) stories distinguished the normal achievers from the LD sample at the significance level (.05) adopted in the present study. However, the

TABLE 3

Frequency of Each Response Level for the Six Moral Judgement Stories in Normal Achieving and LD Groups

	Moral Judgement Response Levels								
	P vs A			A vs I			I vs P		
	1	2	3	1	2	3	1	2	3
Story A:									
LD	10	9	9	4	15	9	1	20	7
NA	15	7	6	8	7	13	1	21	6
Story B:									
LD	4	14	10	6	15	7	1	16	11
NA	6	15	7	5	15	8	1	15	12

P = peer vs = versus

A = authority LD = learning disabled

I = Ideological NA = normal achieving

results obtained from one authority versus ideological story approached significance.

CHAPTER 7

Discussion

In this chapter the results are discussed in terms of the rationale outlined in the introduction which motivated the present study. At the empirical level, the three questions concerning the cognitive, social and moral judgement ability of LD children, as compared to normal achievers, will be considered separately. The overall results will then be related to the theoretical issues investigated and discussed in terms of the cognitive developmental approach to moral development. Finally, the practical and research implications together with the limitations of the present study will be noted.

To avoid possible misunderstanding, a few cautionary remarks are necessary before discussing the present results. First, when referring to the adequate performance of LD children it is not intended to imply that they passed the particular task. Only insofar as their performance is comparable to that of normal achievers is it considered 'adequate' or 'normal'. Secondly, the present results cannot be verified or contradicted owing to the dearth of research in the areas investigated. Thirdly, comparison to any existing data is hazardous as the term 'learning disability' has no clearly defined referent.

7.1 Empirical Issues

The present results revealed a negative answer to question one concerning the cognitive skills of LD children, more specifically their acquisition of the concept of conservation. On tasks of intensive ($p = .35$), extensive and pseudo-conservation ($p = 1.00$) the normal achieving and LD groups did not significantly differ. This result appears to be diametrically opposed to Rees and Lebrun's (1972, p. 14) finding of "quantitative retardations and qualitative perturbations" in the operative thought processes of dyslexics. However, as pointed out in chapter

five differing administration procedures effect Piagetian results (Griffiths et al., 1967, Rose & Blank, 1974) while Gruen (1966) has shown that various scoring criteria can lead to opposing interpretations of the same raw data. This difference in results may thus represent a methodological artifact as Klees and Lebrun (1972) do not detail the exact administration procedure they followed nor even mention their scoring criteria. It can be similarly argued that the differing nature of the samples utilised in the two studies yielded these contradictory findings. For instance, it is possible that the present sample is most similar to Klees and Lebrun's subdivision of 'not very perceptually disturbed' children who showed normal acquisition of some Piagetian concepts. Klees and Lebrun's findings may therefore be seen as providing partial support for the present result, an anomaly which is possibly due to the fact that the two studies are not strictly comparable.

The importance of comparable studies is further emphasised in considering Fincham and Meltzer's (1976) and Meltzer's (1976) investigations. As the present study utilised similar Piagetian administration and scoring procedures, as well as the same population definition used in these studies, it is perhaps not surprising that the present result concurs with the findings of these investigators. There thus seems to be some support for adequate operational thought in LD children even though it may appear anomalous in view of the symptoms associated with this population and their impaired concept formation and categorisation abilities (e.g., Braun, 1963; Cummings & Faw, 1976; Walters & Doan, 1962).

However, the present result may be explained by Myklebust et al.'s (1971) postulate that the intellect of LD children is structured differently as their mental abilities are relatively autonomous and independent. The fact that

success in one sphere is not predictive of that in another may also apply to different areas of Piagetian functioning and hence reconcile the present result with Berger et al.'s (1969) demonstration of retarded causal reasoning in the learning disabled.

The present finding may also be understood in terms of Lloyd's (1972) contention that Piagetian cognitive processes are less vulnerable to variations in formal education than the conceptual abilities measured by standardised tests. Furthermore, like IQ tests Piagetian cognitive tasks measure potential, and as LD children by definition have adequate IQ scores their present performance on the three conservation tasks is not really surprising.

These arguments are also pertinent to the result relating to question two which showed that normal achievers did not significantly differ from LD children on a task of cognitive role taking ability (p > .88). The exact significant of this result is not altogether clear for Flavell et al. (1968) postulate, and as was pointed out in chapter five, this task has a dual interpretation. It can be seen in purely role taking terms whereby the child's distorted perception of the four-card sequence is interpreted as an inability to discriminate a naive other's role attributes vis-a-vis these pictures. Alternatively, the child can be viewed as realistic stimulus bound, incapable of reversibility or in short, preoperational. Seen in these terms the role taking ability of LD children is hardly surprising as it is consistent with the present Piagetian finding. In arguing that the relationship between intellectual and role taking terminology is one of partial synonymity Flavell et al. implicitly concede that this role taking task may not merely measure operational thought even though, as its title implies, it heavily stresses cognitive processes. However, any additional social factors contributing to success on this task do not appear to be impaired in the LD sample

studied.

The ability of these LD children to use logical reasoning in both physical and social tasks can also be supported by Szeminska's (1965) and Kuhlman's (1960) views of early education. According to Szeminska the teaching of 7- to 11-year-olds is characterised by tasks in which memory processes are still predominant and therefore stresses perception and representation of past experience rather than conceptual processes. In similar vein, Kuhlman notes that identifying and naming objects are more important in early school years than reasoning about them. If these viewpoints are correct, then by definition of the school situation, the children investigated in this study are more likely to have been classified learning disabled because of factors such as impaired memory, imagery or perception than inadequate logical reasoning. In terms of this argument it is possible that the criteria for identifying learning diabilities become more inclusive as school work makes increasingly greater demands. Conceivably, one might thus find impaired logical reasoning in older LD children who require this integrity for adequate school performance.

The last point may [illegible] useful in interpreting the third result which showed that LD children displayed adequate moral reasoning [illegible] peer versus authority ($p = .43$; $p =$ [illegible], authority versus ideological ($p = .08$; $p = 1.00$), and ideological versus peer ($p = 1.00$; $p = 1.00$) dilemmas. This finding concurs with previous research which found exceptional groups were not inferior to normal controls on measures of moral judgement (e.g., Barry, 1974; Boehm, 1962; Mac Rae, 1954) and Miller et al.'s (1974) demonstration of adequate moral reasoning in their delinquent group, a sample which they postulate to be learning disabled. However, it appears to be inconsistent with the syllogistic type reasoning which partly motivated the present choice of a LD group, namely,

learning disabilities characterise delinquency,
delinquents manifest impaired moral judgement,
therefore LD children exhibit impaired moral judgement.

When viewed in terms of the above argument forwarded with regard to education it seems possible that impaired moral reasoning is specific to LD adolescents. Hence an older LD sample may be necessary to validly test the above reasoning. This viewpoint is supported by the fact that emotional, behaviour and negative self concept problems increase with age in LD children (Black, 1971; Gates, 1941) A similar argument exists in relation to moral judgement. According to Kohlberg (1964) children only begin to clearly distinguish self interest from indifferent moral concerns at the age of 8 to 12 years. Hence the present sample may be too young to exhibit the impaired moral reasoning which characterises delinquency.

The behavioural characteristics associated with learning disabilities also appear to contra-indicate the present result. However, inadequate moral behaviour does not necessarily imply a deficit in moral judgement. In fact there is evidence showing only small correlations between moral judgement and moral behaviour (Mischel & Mischel, 1976; Santrock, 1975) which is not surprising as moral behaviour has been found to be determined by ego factors other than those specifically entailing moral values or sanctions (Grim et al, 1968; Kohlberg, 1964). Furthermore, the behaviour-judgement distinction is particularly pertinent to the present age-range as the relationship between these two variables increases with age in both normal (Hetherington & Parke, 1975; Kohlberg, 1969; Kohlberg & Turiel, 1972) and mentally retarded populations (Mc Laughlin & Stephens, 1971). This could explain adequate moral judgement despite the possible presence of conduct problems in the LD sample. The apparent paradox presented by this result may also be explicable in terms

of Mac Rae's (1954) distinction between cognitive and emotional moral development. The present study tapped the former whereas behaviour problems among the learning disabled may reflect the latter.

A possible difference in the moral judgement ability of normal achieving and LD children in middle childhood cannot however be excluded. Learning disabled children may show impaired moral reasoning on moral dimensions not measured in the present study or under different test conditions. There is some data suggesting that success on one Piagetian moral dimension is not necessarily predictive of that on another while test responses have been shown to fluctuate according to the format (e.g., picture versus verbal presentation, forced choice versus open-ended stories) and content (e.g., negative versus positive sanctions, minor versus severe consequences) of the moral judgement measure (Armsby, 1971; Buchanan & Thompson, 1973; Chandler et al., 1973; Costanzo et al., 1973; Harris, 1970; Johnson, 1962; Jensen & Hughston, 1973; Medinnus, 1959). These factors may also account for the near significant ($p = .08$) difference found in the one peer versus authority story but not in the other ($p = 1.00$) as the consequences of the former (imprisonment, death) differ radically from the latter (verbal reprimand, hunger). It is possible that such variations may effect normal achieving and LD children differently.

The nature of the moral measures used in the present study emphasises the cogence of the above arguments. Although they stem more directly from Kohlberg each story poses a conflict between the dominant features of Piaget's developmental stages. As Lickona (1976b) points out these stages are not empirically consistent, an observation supported by the intra-individual response variability found in the present study. Hence it would not make empirical sense to treat the present data as indicative of global moral judge-

ment and it is therefore quite possible that LD children may differ from normal achievers on certain aspects of this variable which were not measured. However, the consistency of the present results argues against this interpretation.

7.2 Theoretical Issues

The fact that LD children showed intact cognitive processes (operational thought) and social skills (cognitive role taking ability) in the presence of adequate moral judgement is consistent with the cognitive developmental claim that the former are necessary conditions for the latter. In combination therefore the present results cannot be used to evaluate the relative weighting Piaget gives to social, and Kohlberg to cognitive factors in moral judgement development. Rather, both theories receive support from the present investigation.

Although the overall results prima facie, appear anomalous in terms of the symptoms associated with learning disabilities, they are explicable when viewed within the framework of cognitive developmental theory used in this study. Several references have been made to the extreme cognitive emphasis of this approach (hence the relative emphasis of the Piagetian aspect of this study). The cognitive elements generic to each task may provide a unifying factor accounting for the consistency found in the present results.

It is possible to view all the measures utilised in this study in cognitive terms. More specifically, as outlined in the introduction each involves the ability to decenter, to become aware of reciprocal relations,the sine qua non of operational thought. As there appears to be some evidence that LD children are not necessarily deficient in this respect (Fincham & Meltzer, 1976; Meltzer, 1976) their adequate performance on social and moral tasks may be accounted for by such a process. Interpreted thus the value of the present

theoretical framework becomes apparent. As Hetherington and Mc Intyre (1975) point out in their annual review of developmental psychology, the field of child development is marked by a lack of communication between different areas of research. Cognitive developmental theory may provide a conceptual framework to integrate the 'morass of findings' emanating from this state of affairs and thereby obviate the present prevalence of atheoretical, 'single shot' studies. It is in response to such criticisms in conjunction with Hetherington and Mc Intyre's call 'to get it all together' that the present study included a theoretical perspective to unite the diverse areas of development investigated.

7.3 Implications and Limitations

Having discussed the empirical and theoretical issues which form the major focus of this study various implications together with its limitations remain to be outlined. Unless the suggestion is otherwise it must be explicitly stated that this section is based on inferences stemming fro m the present findings rather than direct investigation. Consequently, the suggestions forwarded should be seen merely as tentative hypotheses requiring investigation.

Perhaps the most significant implication of the present study pertains to the general literature on learning disabilities. In this respect the claims of widespread impairment among the learning diabled may require severe qualification The present results are at variance with the postulate that LD children suffer from generalised conceptual (see Lerner, 1971) or social (see Connolly, 1971) deficits. This viewpoint is supported by research on normal children which, like the present study, emphasises the complexity of psychological processes in LD children. For example, Moray (1970) has found low correlations between various measures of attention indicating that failure on one task does not necessarily imply a general attention deficit. It therefore

seems likely that cognitive and social problems among the learning disabled are specific to certain areas of functioning. Consequently it is suggested that much of the present literature is open to question as its general claims need to be precisely stated and more importantly, empirically validated.

Such validation may profitably employ the competence-performance distinction as the value of this concept is emphasised by the fact that it could account for the present results. The normal achieving and LD groups may not have differed in this study owing to the concerted effort which was made to control performance variables and hence assess the child's true abilities. As most LD children succeeded rather than failed on the tasks indicates that this may have been the case as Furth (1969, p. 69) notes that,

> "If an organism without a certain factor fails on a given task, one cannot conclude that the factor is directly related to the task since other uncontrolled influences may be at work. But if he succeeds on a given task, one can infer conclusively that the missing factor is not a prerequisite for the task".

The possible 'missing factors' explored in the present study namely, conservation and role taking ability, proved to be intact. Although therefore tempted to draw on the full armoury of LD symptoms to make these results noteworthy, a well established precedent in research on learning disabilities, the heterogeneity of the LD population precludes this possibility. The last mentioned factor could not be controlled in the present study as no diagnostic information was available on the children comprising the LD group. Hence it is explicitly recognised in the design of this investigation that to implicate the characteristics associated with learning disabilities these must be measured in the sample under investigation. The present results are therefore only important in terms of conservation and role taking factors in moral judgement and do not yield information on the relation between symptoms associated with learning

disabilities (e.g., attention deficits, perceptual impairments) and moral growth. Hence future researchers should study moral judgement in a sample which is demonstrated to be deficient in respect to one or more of these variables. Alternatively, LD symptoms which suggest impaired moral reasoning could be investigated in normal achievers. For example, Grim et al.'s (1968) attempt to relate attention to experimental measures of moral conduct and teacher ratings of resistance to temptation may profitably be extended to include moral judgement measures.

A competence-performance explanation of the present results has further implications for future research. As pointed out in chapter four there has been little attempt to modify moral judgement dilemmas for use with children, a factor which may differentially effect normal achievers and LD children. The present nonsignificant results suggest that serious attempts be made to simplify moral judgement instruments in research utilising exceptional children, especially those where a language deficit is suspected. The possibility of obtaining invalid results, owing to the confounding influence of performance variables would thus be greatly diminished.

Other factors should also be controlled in future research on the moral judgement of exceptional children. For example, it was noticed in the present study that some children projected more freely in responding to the moral dilemmas than others. As moral judgement is almost exclusively measured by projective techniques differences found between populations may reflect projective ability when groups are not equated on this variable. Similarly, the sex of the dilemma protagonist may influence findings especially in populations where personality development may be impaired. It is possible that owing to factors such as inadequate identification, an exceptional child may give moral

judgements which fluctuate according to the sex of the protagonist. Hence it is conceivable that an exceptional group (e.g., the learning disabled) may display adequate moral judgements in response to stories involving male but not female protagonists or vice versa. Finally, future researchers should investigate moral judgement between populations not only in terms of inter-stage, ut also intra-stage differences,as well as the degree to which similar moral convictions are held. As very little is known about the above variables they could be profitably studied in 'normal' groups.

At a more pragmatic level the present results have implications for both diagnosis and education. With regard to the former a battery of tests assessing the form, rather than content of reasoning might prove useful. For example, the Piagetian result is consistent with Tuddenham's (1970) observation that such measures might diagnose cognitive ability more precisely than IQ. As such tests can be used to define ability in terms of structural-developmental stages they may yield useful information for education. Instead of merely placing the child on a scale of norms they wou d delineate specific instructional needs. Furthermore, the inclusion of social and moral measures in diagnosis emphasises the child as a whole person. Not only are difficulties with academic tasks important but the equally devastating nature of nonverbal learning disabilities would be recognised. Finally, such a battery assessing the processes rather than the end-products of thought, might help explain the curious reason why LD children have adequate IQs as Piagetian, role taking and moral judgement tasks have all been found to correlate with intelligence (see chapter 5).

With regard to education the present results suggest that the exclusion of explicit moral instruction in remedial programmes for LD children may be justified. As moral judgement was intact in this group it is suggested that

information is required to help narrow the gap between what the LD child actually does and what he realises he should do. This problem is not however, unique to the present population for there is a general "need to know how people's theoretical moralities relate to the rest of their lives" (Wright, 1971, p. 172). Such information is particularly important in view of the growing number of intervention programmes stemming from research on moral judgement (see Rest, 1974b for a review of the theoretical justification and implementation of these programmes). In this respect the distinction between classical and practical moral dilemmas may prove useful. For instance LD children may be able to reason about hypothetical situations involving ficticious characters or other people but not function adequately when personally confronted with a moral problem. This would also account for the behaviour problems of LD children despite normal performance on classical moral judgement tasks.

The limitations of this study however, detract from the cogence of these above mentioned implications. For example, the present results may be idiosyncratic to the sample studied as the LD children were drawn from remedial schools which differ in significant aspects to traditional educational settings. Hence the small classes (5 -10 pupils), provision of family, group and individual psychotherapy, together with the emphasis on each child's individual needs, may result in the type of atmosphere and adult-child reciprocal interaction likely to foster moral growth. In fact the 'induction' type discipline (i.e., explanation pointing to the consequences for others rather than punishment) used in these two schools has been related to moral growth and role taking development (Hoffman & Saltzhein, 1967; Kerchoff, 1969). The conservation results may also have been influenced by remedial schooling. In contrast to normal schools which emphasise verbal instruction, remedial

education tends to stress the actual performance of tasks. In remedial schools children are thus taught to manipulate symbols as an aid to concept formation and are also often given simple conservation type exercises. The nature of a remedial school environment might therefore have influenced performance on all the variables measured in the present study. It is possible that different results would have been obtained if a sample of LD children attending regular schools had been tested. In addition to investigating such children, future studies could utilise a larger sample, including children from a lower socio-economic class, as well as younger and older age groups.

The measures utilised in future research also need to be broadened. Operational thought, role taking and moral judgement represent multidimensional variables only limited aspects of which were tapped in the present study. Consequently, classification tasks, perceptual and affective role taking measures, practical as well as a more extensive sample of classical moral dilemmas could be administered to LD children. The last suggestion may pose a problem for as Taylor (1974) notes there is at present no set of dilemmas which equally represents or exhaustively covers the different systems used to rate moral judgements. Perhaps more important than the substantive nature of the tasks is administrative procedure. The present study reflects this problem. The method clinique used in respect to moral judgement assessment brings into question the child's use and understanding of language. However, standardised administration utilised where possible in the present study (e.g., conservation) allows children to respond in terms of the first and easiest solution which springs to mind rather than the most logical. A method combining the value of both approaches is urgenly required especially for investigations of exceptional populations such as the learning disabled. In developing such a technique it

may prove fruitful to evaluate the use of forced-choice as opposed to open-ended questions.

Finally, the theoretical framework within which this study was conducted places an important limitation on it. Cognitive developmental theory relates primarily to abstract psychological processes. The present results are thus limited to the judgemental abilities of LD children in the moral realm and do not purpot to elucidate their general moral status. Nor do they attempt to explain moral judgement development. To determine the developmental relationship of variables such as cognitive processes, social skills and moral judgement longitudinal study of their codevelopment is necessary.

In sum,the restricted nature of the sample studied, the measures employed, the theoretical framework of the present study and its cross-sectional nature argue against too broad a generalisation of the present results. Despite these limitations it points to a neglected aspect of learning disabilities and in doing so provides both initial information in this area as well as a test of the cognitive developmental approach to moral development. It is also hoped that the breadth of the abilities investigated contributes to an approach which emphasises the whole LD child not only his academic abilities. Finally, the present study attempts to meet the need, in both developmental child psychology and the field of learning disabilities for theory based research.

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APPENDIX A

RAW SCORES OBTAINED BY EACH SUBJECT ON THE ROLE TAKING AND THREE CONSERVATION TASKS

Subjects	Task	CON						RT	
	Group	L D			N A			L D	N A
	Sub-T	A	B	C	A	B	C		
	Max. Score	4	4	1	4	4	1	2	2
1		4	4	1	4	4	1	1	2
2		4	4	1	3	2	0	2	[illegible]
3		1	3	0	1	2	0	2	1
4		4	4	0	4	1	1	2	1
5		4	4	1	2	4	0	2	2
6		1	1	0	4	4	1	1	2
7		4	2	0	4	4	1	2	2
8		4	4	1	2	1	1	2	1
9		4	4	0	4	4	0	2	2
10		4	4	1	2	4	1	2	1
11		2	1	0	4	4	0	2	1
12		4	4	1	2	4	0	1	1
13		1	1	0	4	4	1	1	2
14		4	4	1	4	4	1	2	2
15		4	4	1	4	4	1	2	2
16		4	4	1	4	4	0	2	2
17		4	4	1	4	4	1	1	2
18		2	4	0	1	4	1	1	1
19		4	4	1	4	4	0	2	2
20		4	4	1	1	2	4	2	2
21		4	4	1	3	3	0	2	1
22		4	4	1	4	4	1	2	2
23		4	4	1	4	4	1	2	2
24		4	4	1	4	4	1	2	2
25		4	4	1	4	4	0	0	1
26		4	4	1	4	4	1	2	2
27		4	4	0	4	4	1	2	2
28		4	2	1	4	4	1	1	2

L D = learning disabled
N A = normal achieving
Sub-T = sub-task
CON = conservation
RT = role taking
Max. = maximum

APPENDIX B

RESPONSE CATEGORIES ASSIGNED TO EACH SUBJECT FOR THE SIX MORAL DILEMMAS

Sub-jects	Conflict	P vs A				A vs I				I vs P			
	Story	A		B		A		B		A		B	
	Group	LD	NA	LD	NA	LD	NA	LD	NA	LD	NA	LD	NA
1		1	1	2	2	2	1	2	2	1	3	2	2
2		1	1	2	2	2	1	3	3	2	3	3	3
3		1	1	2	2	1	2	1	1	2	2	2	1
4		2	3	3	2	2	3	2	3	2	3	3	3
5		2	1	3	1	2	2	2	2	2	2	2	2
6		2	2	3	1	3	1	1	2	2	2	3	2
7		1	2	2	3	3	2	1	2	2	3	2	2
8		3	1	1	1	2	1	2	2	2	2	3	2
9		1	1	3	2	3	3	2	2	2	3	3	2
10		1	1	2	1	2	1	2	1	2	2	2	1
11		1	2	2	2	3	3	2	1	2	3	2	1
12		3	1	1	3	1	1	3	3	2	2	3	3
13		3	3	3	3	2	2	2	2	2	3	3	2
14		1	1	2	2	3	2	2	3	3	2	2	3
15		2	1	2	1	1	1	2	2	2	2	2	2
16		3	2	3	2	1	3	2	2	2	2	3	2
17		1	1	2	3	2	2	2	2	3	3	2	2
18		1	2	1	2	3	3	2	2	2	2	1	2
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20		2	3	2	2	3	1	1	3	3	1	2	3
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24		3	1	2	3	2	3	3	2	2	2	2	2
25		3	1	3	2	2	2	3	1	2	3	2	1
26		2	3	2	2	3	3	1	1	3	2	3	1
27		2	3	3	3	2	3	1	3	2	3	2	3
28		2	1	3	2	2	3	2	2	2	2	3	2

P vs A = peer versus authority
A vs I = authority versus ideological
I vs P = ideological versus peer
LD = learning disabled
NA = normal achieving

APPENDIX C

INSTRUCTIONS FOR THE THREE CONSERVATION OF LIQUID TASKS

1. ORIENTATION

4 identical glass containers

2 beakers (A_1, A_2) contain the same amount of liquid

1 beaker (B) contains less liquid

1 beaker (C) contains more liquid

E "Here are some glasses. This one (A_1) is your and these 3 (A_2, B, C) are mine."

Qu. 1. Which one of my glasses (pointing) has less water to drink than your glass?

2. Which one of my glasses has the same amount of water to drink as your glass?

3. Which one of my glasses has more to drink than your glass?

If S answers these questions correctly, E then continues with the remaining tasks. If not E explains the concepts of 'more', 'less' and 'same amount' and asks the orientation questions again until S shows that he understands them.

2. TASKS

2 identical glass containers (A_1, A_2)

1 wide wine glass (B)

3 identical small sherry glasses (C_1, C_2, C_3)

2 square perspex jars (D_1, D_2)

1 pouring jug

Red coloured-water

A. E "Let's pretend we're at a party and that this coloured water is cool-drink. This is your glass (A_1) and this is my glass (A_2)". E pours 'cool-drink' into the 2 beakers (A_1 & A_2) until they are half full. As E pours into A_2, he says, "Say 'stop' when my glass has the same amount of water to drink as your glass." (If necessary S is allowed to adjust the level himself).

E then continues, "watch what I do" and pours the water from A_1 into a wide wine glass (B). "Now (pointing) your drink is there and mine is here."

Qu. 1. Has my glass the same amount of water to drink as your glass?

If S answers 'No' E asks: Which has more?

2. (If Yes). Who has more to drink - you or me?

3. Why do you think so?

4. (E pours water from B back into A_1) What about now: Is there the same amount of water in the glasses, or has one got more than the other?

B. E introduces 3 sherry glasses (C_1, C_2, C_3)

E "Now I want to have my drink in these glasses." E pours the water from A_2 into the sherry glasses (equal amounts). "This (pointing) is my drink and that is yours."

Qu. 1. Has your glass the same amount of water to drink as my three glasses?

If S answers 'No' E asks: Which has more?

2. (If Yes) Who has more to drink - you or me?

3. Why?

4. (E pours water from C_1, C_2 & C_3 back into A_2) What about now: do we have the same amount to drink or does one of us have more?

C. If successful on either of these tasks E introduces the 2 square perspex containers (D_1 & D_2)

E "Here are 2 different jars. Now what I want you to do is to pour the same amount of water into this jar (pointing) and that jar, so that if you drink this one and I drink this one we will both have just as much to drink. We must have the same amount to drink. O. K.?"

APPENDIX D

SCORING SYSTEM FOR THE CONSERVATION TASKS

To pass on either task A or task B the subject had to obtain a full full score according to the following system;

1) 1 point for replies indicating an ability to conserve on each of the two transformation questions (Qu. 1 and 2).

2) 1 point for responses recognising the transformation of the substance back into its initial state (Qu. 4)

In addition the subject's explanation (Qu. 3) was scored 1 or 0 according to the following criteria

1) 1 point for responses indicating comprehension of at least one of the following Piagetian principles

a) Reversibility

If it is recognised that the transformed liquid can be returned to its original state of equality by a reverse operation e.g., "if you pour this water back into here (the original beaker) they will have the same amount"

b) Invariant Quantity

Reference is made to the previous equality of the liquid e.g., "you had the same amount before and you just poured it into this glass (these 3 glasses) - you didn't change the amount" or "you didn't add or take away water so they are still the same."

c) Compensation

It is understood that variation in one dimension includes a reciprocal change in another e.g., "you just poured the water

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c) Compensation

It is understood that variation in one dimension includes a reciprocal change in another e.g., "you just poured the water

into a shorter and wider glass", or "it looks more but they are really the same - the glasses are different."

2) A score of 0 was assigned if;

a) There was no explanation

b) A magical explanation

c) The child simply described the procedure

The total score for each task was obtained by adding the judgement and explanation scores. Hence

Maximum judgement score = 3

Maximum explanation score = 1

TOTAL = 4

To pass task C subjects had to demonstrate that they could carry out on the plane of action what was reflected by their verbal responses. A score of 1 was given only if the subject realised that for two identically shaped but different sized square jars to contain equal amounts the level of the water in the jars should differ. All other responses were scores 0.

APPENDIX E

INSTRUCTIONS AND SCORING FOR THE COGNITIVE ROLE TAKING TASKS

Seven pictures (see pp. 137-138) illustrating a story sequence are placed before S. E then says, "Here are some pictures which tell a story, just like the newspaper comics. Can you tell me the story? Start at the beginning (pointing)." If it is clear that S is experiencing difficulty E asks, "Why did the boy climb the tree?"

Once S has told a story E continues, "That's good! Now I'm going to take three pictures away. Let's pretend 'X' (the subject's best friend) is going to come into the room and sit here right where you are. I show X these pictures (pointing to the 4-card sequence) and ask him to tell me a story. What story do you think X will tell?" If S is unable to continue E encourages him and eventually says, "Look at the pictures and tell me the story X would tell."

On completion of the story E asks, "Why would X think the boy climbed the tree?"; "What would X think the dog is doing in the last picture?"

Responses were assigned to one of three categories:

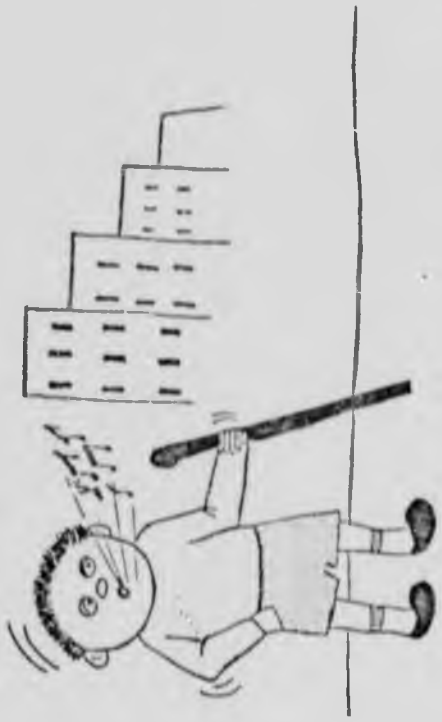
Category O, when asked to predict X's story S either retells the 7-picture story or continues to see the fear-of-dog motive as the central story theme.

Category 1; a 'correct' 4-card story is narrated but on questioning, the fear-of dog motive readily emerges.

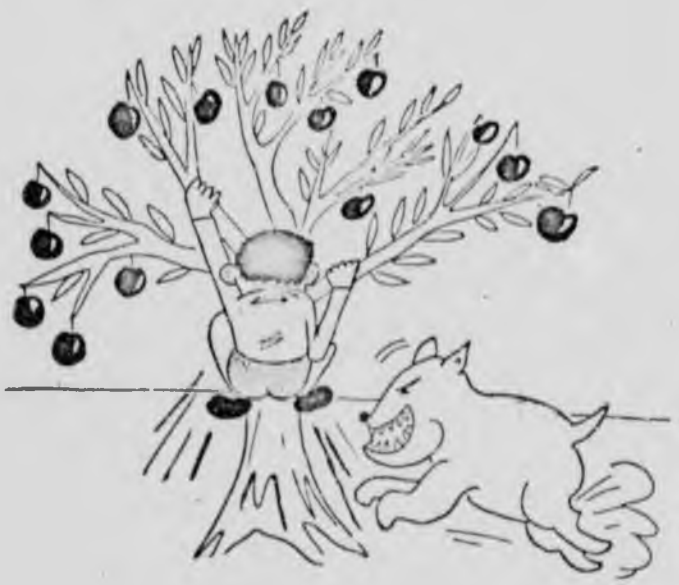
Category 2; again a 'correct' 4-picture story is told but on subsequent inquiry the dog is not suggested as a motive for climbing the tree - it is held to be irrelevant to the main story theme.

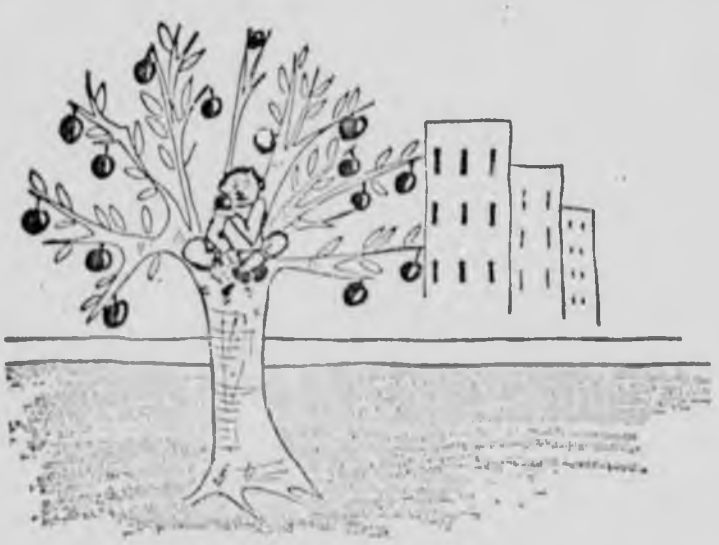


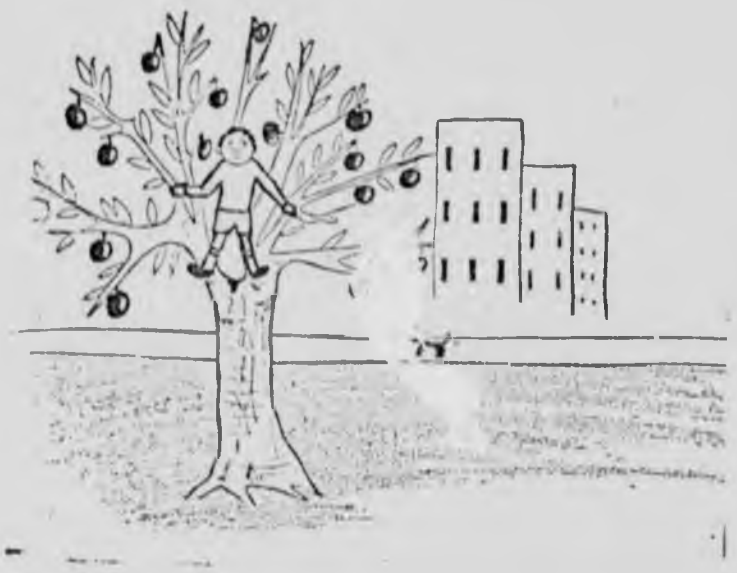












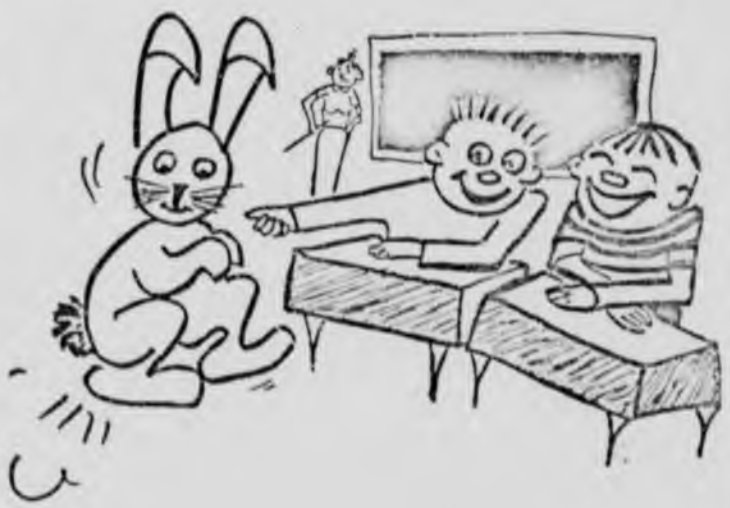
APPENDIX F

MORAL JUDGEMENT STORIES

Peer versus Authority

A. Harry came to school and told Dick a secret. He said, "I have brought a rabbit to school and I have hidden it in the cupboard". Dick promised not to tell anyone. The rabbit got out of the cupboard and the teacher was very cross because no one was allowed to bring rabbits to school. She asked Dick who rabbit it was. Dick didn't know what to do. Should he tell the teacher and break his promise to Harry? Or should he not tell the teacher so Harry would not get into trouble?



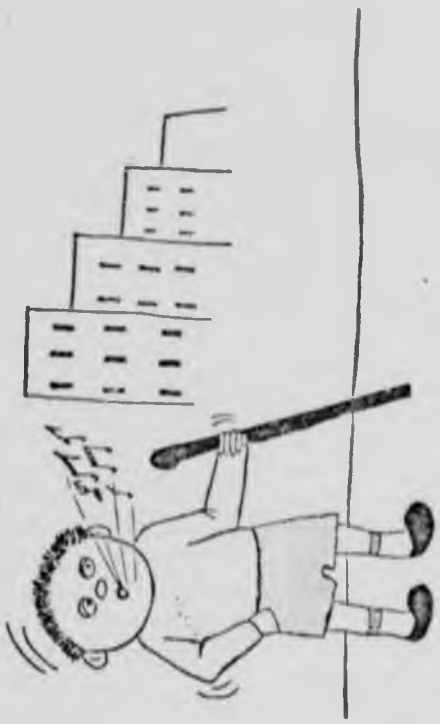




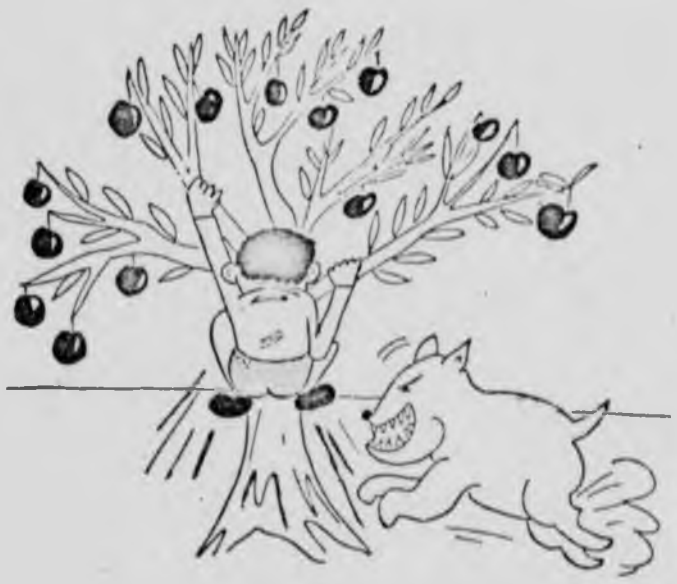


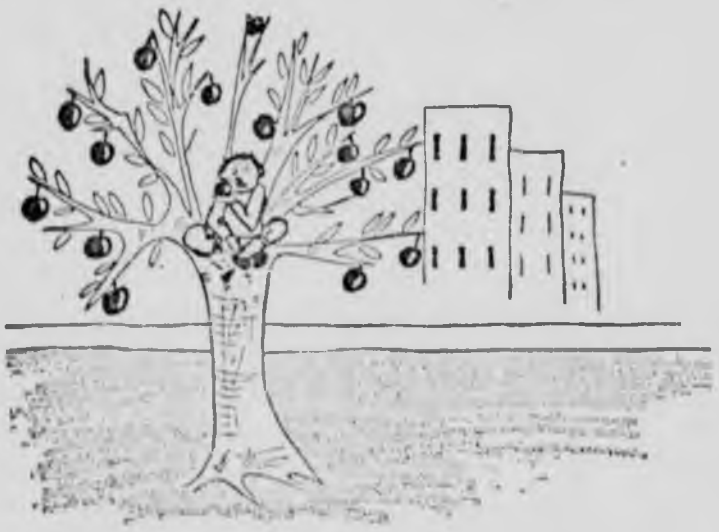


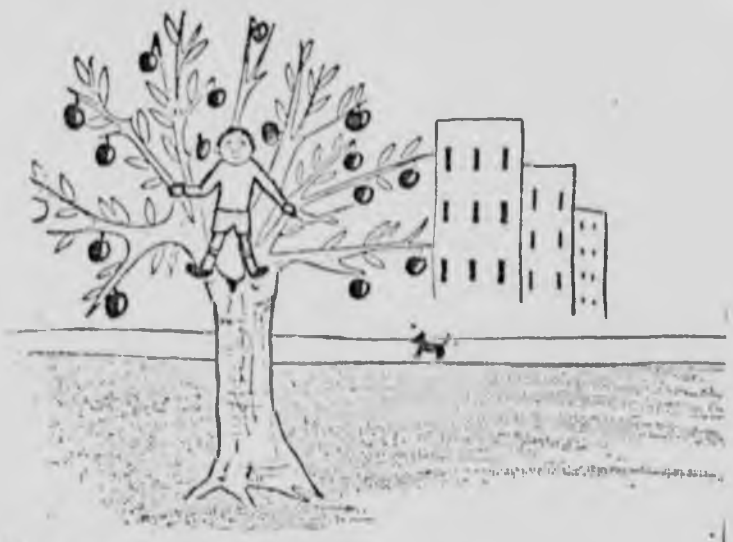












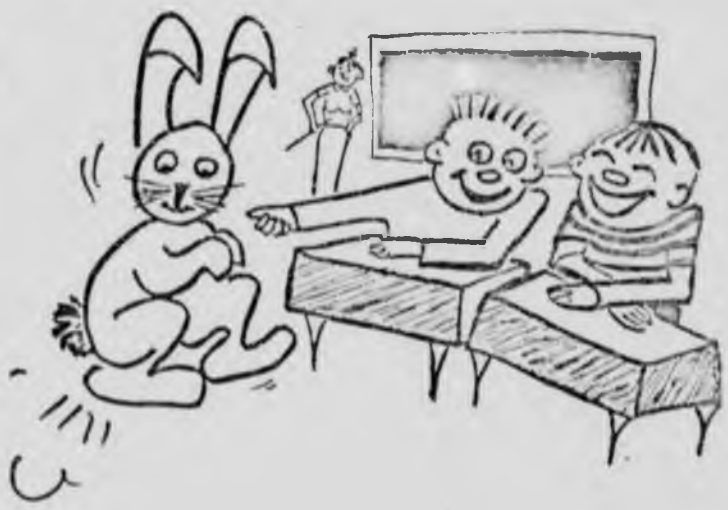
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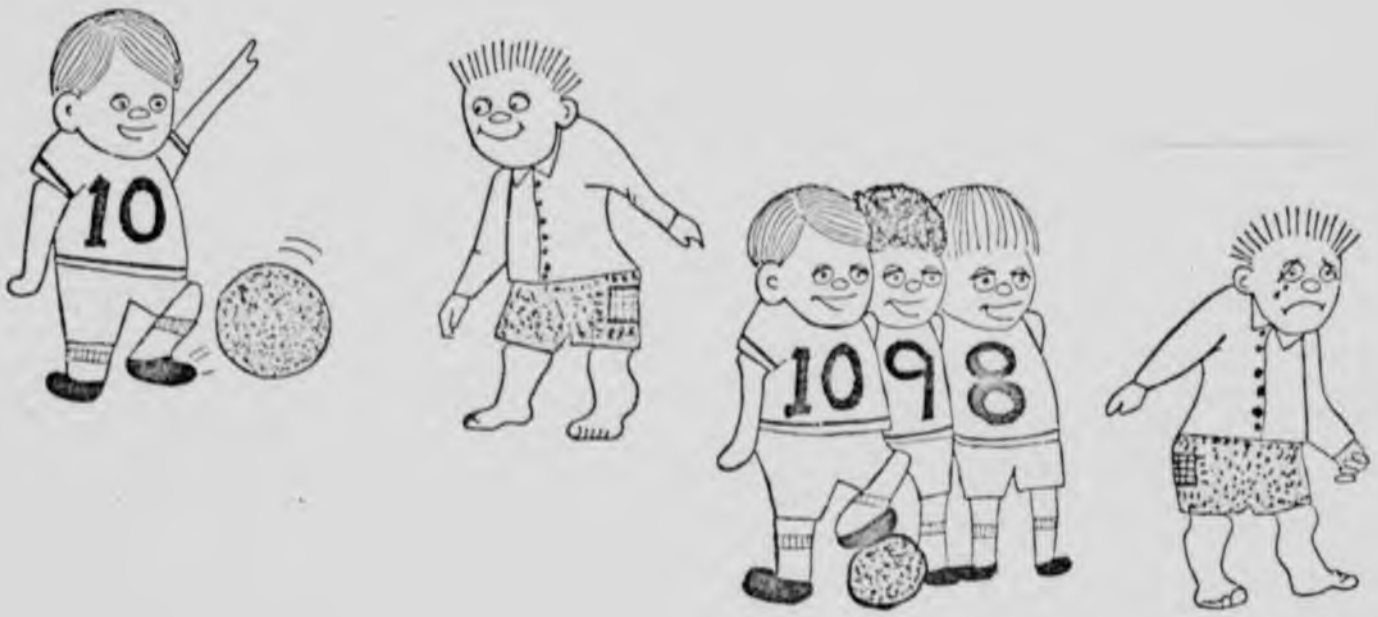








B. Tim and Jason were friends and were chosen to play soccer for their school. Tim was too poor to buy soccer boots and so he couldn't play for the school. One day Jason was playing in the park. He say a pair of soccer boots on the bench. They looked like they would fit Tim. Jason didn't know what to do. Should he take those boots and give them to Tim even though they weren't his? Or should he just leave them there?



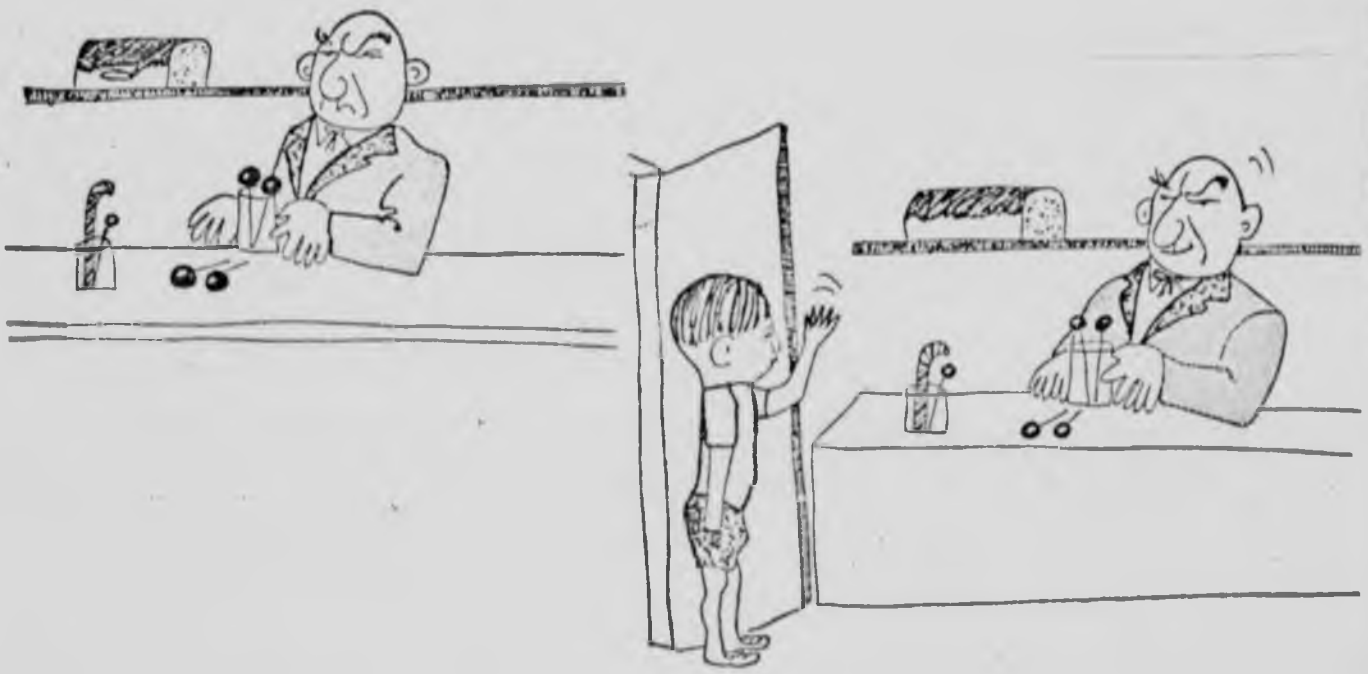
Authority versus Ideological

A. A lady was in great pain from a special kind of sickness Her husband was poor and didn't have enough money to buy her special medicines that would make the pain stop. He went to the medicine shop (chemist) and asked the owner, "Will you sell me the medicine for the money I have or let me pay later?" The owner refused (said no) and the husband didn't know what to do? Should he break into the shop and take the medicine? Or should he not and let his wife suffer (be in pain)?





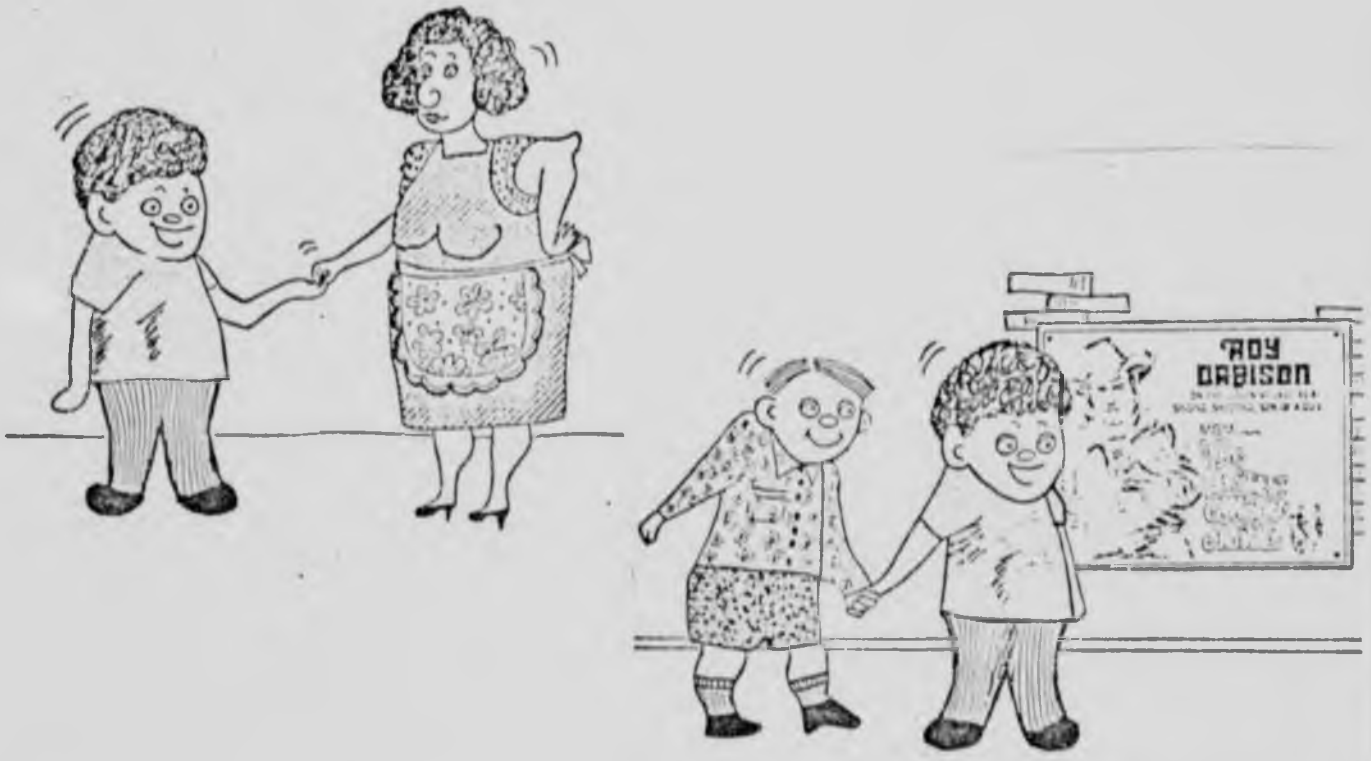
B. One day, Mr Tony was working all alone in another man's shop. A boy came in to buy a loaf of bread but he didn't have enough money. Mr Tony knew the boy's family was poor and that they didn't have enough money for food. But Mr Tony couldn't buy the bread for the boy because he only get's paid enough money to buy his own food. Mr Tony didn't know what to do. Should he let the boy go hungry? Or should he give the boy bread that did not belong to him?

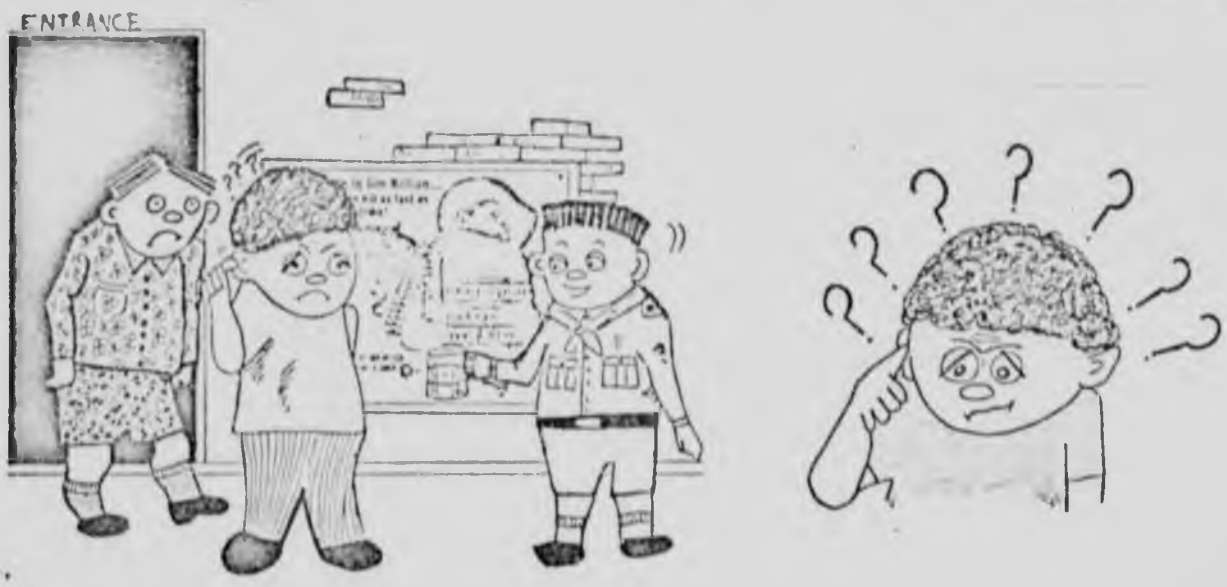




Ideological versus Peer

A. Mother gave David his pocket money. David had just enough money to pay for two bioscope tickets so he promised to take his friend to bioscope. On the way a scout stopped the two boys. He asked David for money to buy clothes and food for poor people. David thought he should give his money. David didn't know what to do. Should he take his friend to bioscope or should he help the poor people and break his promise to his friend?





B. Tom was a good soccer player. He was on his way to play for his team when he met his friend. His friend was going to help some crippled children at a party and wanted Tom to come because there weren't enough people to help. He had also promised to play soccer for the team and he knew that his friends were waiting for him. But Tom thought he should help the crippled children. Tom didn't know what to do.







APPENDIX G

SCORING SYSTEM FOR THE MORAL JUDGEMENT STORIES

Responses were assigned to categories according the following criteria;

Level 1: Authority

A rule is made to be obeyed and is therefore right because it is a rule. Conformity to rules is due to fear or avoidance of punishment. One cannot lie to an adult, e.g., "He'll go to jail," (story 3)

Level 2: Authority-bound but awareness of reciprocity

Despite an awareness of reciprocal relationships, there is a tendency towards resolving conflicts in terms of adherence to authority or benefit towards the self. Rules can thus be broken for personal needs, e.g., "She won't be able to cook for him", (story 3)

Level 3: Reciprocity

Reciprocity involves mutual give and take, together with a respect for other's rights. Respect for a peer's rights outweighs the force of rules. Rules or conformity to them is only valid insofar as it is based on cooperation between peers, e.g., "Cos it's not fair for his wife to be in pain" (story 3)

Level 4: Societal order

Conformity to rules or law is based on the need for societal order not just to obey per se. The rational bases of law are recognised and they are seen as necessary for the protection of individual rights and the proper

functioning of society, e.g., "Otherwise everyone would just break in; nobody would be able to look after his belongings" (story 3).

Level 5: Ideological

Principles based on universal human values form the basis of reasoning at this level. The principles are valued above one's own self-interests and are carried out despite the derogatory effects they might have on the individual, e.g., "The woman's life is more important than law" (story 3)

If there was any doubt as to the level of judgement reflected in the S's global response he was scored on his first spontaneously emitted statement.

Author Fincham F D
Name of thesis Moral judgement in learning disabled children 1976

PUBLISHER:
University of the Witwatersrand, Johannesburg
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