

THE COGNITIVE PROCESSES OF EDUCABLE MENTALLY  
RETARDED CHILDREN IN HYPOTHETICAL TEMPTATION  
TO STEAL SITUATIONS AND THEIR RESPONSES TO  
TREATMENT

by

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This thesis contains no material which has been accepted for the award of any other degree or diploma in any University, and to the best of my knowledge and belief contains no paraphrase or copy of material previously published or written by another person, except where due reference is made in the text of this thesis.

Allan Haines  
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## TABLE OF CONTENTS

	<u>Page No</u>
ABSTRACT .. .. .	xvi
CHAPTER 1 INTRODUCTION .. .	1
LITERATURE REVIEW TO STUDY I .. .	7
CHAPTER 2 DEFINITION AND NATURE OF STEALING .. .	8
2.1 Definition of Stealing .. .	8
2.2 The Nature of Stealing .. .	9
CHAPTER 3 FACTORS RELATED TO RESISTANCE TO TEMPTATION AND THE TEMPTATION TO STEAL .. .	11
3.1 Developmental Factors .. .	11
3.2 Demographic Variables .. .	13
3.3 Parental and Person Variables .. .	14
3.4 Sex Differences .. .	16
3.5 Observation of Models .. .	16
3.6 Cognitive Factors and Self Control .. .	18
3.7 Characteristics of the Situation .. .	22
3.8 An Argument for the Generality of Responding .. .	23
CHAPTER 4 JACKSON'S MODEL OF COGNITIVE PROCESSES IN HYPOTHETICAL TEMPTATION TO STEAL SITUATIONS .. .	28
4.1 The Structure of Cognitive Processing in Stealing Situations .. .	28
4.2 Jackson's Cognitive Schemata .. .	31

CHAPTER 5	METHODOLOGICAL PROBLEMS AND ISSUES IN MEASURING COGNITIVE PROCESSES IN TEMPTATION TO STEAL BEHAVIOUR ..	38
5.1	Behavioural Measures ..	38
5.2	Self-Report Measures ..	42
5.3	Judgemental Measures ..	43
5.4	Pilot Studies ..	46
	<u>STUDY I</u> ..	47
CHAPTER 6	AN ANALYSIS OF EDUCABLE MENTALLY RETARDED CHILDREN'S RESPONSES AND COGNITIVE PROCESSES IN HYPOTHETICAL TEMPTATION TO STEAL SITUATIONS ..	48
CHAPTER 7	METHOD ..	53
7.1	Sample ..	53
7.2	Design ..	53
7.3	Procedure ..	59
CHAPTER 8	RESULTS AND DISCUSSION ..	79
8.1	<u>Part I</u> Educable Mentally Retarded Children's Responses in Hypothetical Temptation to Steal Dilemmas and Real-Life Temptation Situations ..	79
8.2	<u>Part II</u> Educable Mentally Retarded Children's Cognitive Processes in Hypothetical Temptation to Steal Situations ..	100
8.3	General Conclusion of Study I ..	126
	LITERATURE REVIEW TO STUDY II ..	127
CHAPTER 9	THE MODIFICATION AND TREATMENT OF STEALING BEHAVIOUR ..	128
9.1	Cognitive-Informational Approaches to Shoplifting ..	128

9.2	Social Learning Theory and the Treatment of Stealing ..	131
9.3	Cognitive Training and Stealing ..	144
9.4	A Direct Instruction Program to Facilitate Resistance to Stealing ..	152
	<u>STUDY II</u> .. ..	158
CHAPTER 10	EDUCABLE MENTALLY RETARDED CHILDREN'S RESPONSES TO TREATMENT IN HYPOTHETICAL AND REAL-LIFE TEMPTATION TO STEAL SITUATIONS ..	159
10.1	The Purpose ..	159
10.2	Method ..	159
10.2.1	Hypotheses ..	159
10.2.2	Design ..	163
10.2.3	Subjects ..	164
10.2.4	Testing Procedures ..	164
10.2.5	The Treatment Programs ..	167
CHAPTER 11	RESULTS ..	191
11.1	Data Analysis ..	191
11.2	Summary of Findings ..	222
CHAPTER 12	DISCUSSION ..	226
12.1	Interpretation of Findings ..	226
CHAPTER 13	CONCLUSIONS OF STUDY II ..	240
REFERENCES	.. ..	243
APPENDICES	.. ..	254

## LIST OF TABLES

		<u>Page No</u>
TABLE 1	A Situational Breakdown of Children's Resistance Responses on the Behavioural Measure .. ..	81
TABLE 2	A Situational Breakdown of Children's Resistance Responses on the Judgement Measure .. ..	84
TABLE 3	Frequency of Yielding Responses on the 'did do' and 'should do' Measures by the 83 Children Classified by Type of Cognitive Process ..	101
TABLE 4	Frequency of Resistance Responses on the 'did do' and 'should do' Measures by the 83 Children classified by Type of Cognitive Process ...	104
TABLE 5	Composition and Defining Characteristics of the Experimental and Control Groups ..	164
TABLE 6	Degree of Change from Pre- to Post-test on the 3 Groups .. ..	194

## LIST OF FIGURES

	<u>Page No</u>
FIGURE 1 Jackson's Schematic Representation of Cognitive Processes in a Temptation Situation .. ..	29
FIGURE 2a The Lost Purse Situation .. ..	62
FIGURE 2b The Little Brother Situation ..	62
FIGURE 3a Slide Presentation of the Temptation to Steal Situations to the Child ..	63
FIGURE 3b Tester Orally Presenting the Temptation Situations and Recording the Child's Responses .. ..	63
FIGURE 4a Representation of a Boy Finding it Easy to Decide 'right' from 'wrong' ..	67
FIGURE 4b Representation of a Boy Finding it Difficult to Decide 'right' from 'wrong'	67
FIGURE 5a Representation of a Mother Who Explains Then Smacks .. ..	68
FIGURE 5b Representation of a Mother Who Explains But Does Not Smack .. ..	68
FIGURE 6a Child Rolling Ball at the 'cut-out man'	74
FIGURE 6b Locking Mechanism to Stop the Bell Ringing	74
FIGURE 7 Frequency of Subjects' Resistance Responses in Each Situation on the 'should do' and 'did do' Measures .. ..	86
FIGURE 8 Mean Yielding Cognitive Process Scores on the 'did do' and 'should do' Measures	102
FIGURE 9 Mean Resistance Cognitive Process Scores on the 'did do' and 'should do' Measures	105
FIGURE 10 Frequency of Subjects Using Differential Yielding Cognitive Processes in Each Situation on the 'did do' Measure ..	109
FIGURE 11 Frequency of Subjects Using Differential Resistance Cognitive Processes in Each Situation on the 'did do' Measure ..	111

FIGURE 12	Frequency of Categorical Resisters Using Differential Cognitive Processes on the 'did do' Measure .. ..	115
FIGURE 13	Frequency of Subjects Using Differential Yielding Cognitive Processes in Each Situation on the 'should do' Measure ..	119
FIGURE 14	Frequency of Subjects Using Differential Resistance Cognitive Processes in Each Situation on the 'should do' Measure ..	121
FIGURE 15	Serial Organisation of the Resistance Response Chain .. ..	156
FIGURE 16	Testing and Treatment Timetable - Study II	168
FIGURE 17	An Example of a Slide of a Temptation Situation Used in the GIP Program ..	171
FIGURE 18a	The Display Panel with the 'NO' and 'YES' Decision Buttons .. ..	175
FIGURE 18b	The Box with the 'red' and 'green' Bulbs Indicating to the Experimenter Which Decision the Child has Made ..	175
FIGURE 19a	'Name' Labels Which the Child Used to Sort His/Her Drawings from the Experimenter's Drawings .. ..	177
FIGURE 19b	'Mine/Yours' Labels Which the Child Used to Sort His/Her Drawings from the Experimenter's Drawings .. ..	177
FIGURE 19c	'Own/Do Not Own' Labels Which the Child Used to Sort His/Her Drawings from the Experimenter's Drawings .. ..	178
FIGURE 20	Format of Slide Presentation of the Resistance Chain .. ..	180
FIGURE 21a	The Temptation Problem Situation Slide ..	183
FIGURE 21b	The 'Think' Slide .. ..	183
FIGURE 21c	The 'Be Fair' Slide .. ..	183
FIGURE 21d	The Temptation Problem Situation Slide ..	183

FIGURE 22a	The 'Think' Slide	..	..	184
FIGURE 22b	The 'Being Fair Makes the Owner Happy' Slide	..	..	184
FIGURE 22c	The 'Being Fair Makes the Child Happy' Slide	..	..	184
FIGURE 22d	The 'Think' Slide	..	..	184
FIGURE 22e	The 'Try Again' Slide	..	..	184
FIGURE 23	The 'Legitimate Alternatives' Slide	..		186
FIGURE 24a	The Legitimate Alternative Training of 'Saving Money'	..	..	188
FIGURE 24b	The Legitimate Alternative Training of 'Doing an Odd Job'	..	..	188
FIGURE 25a	The 'Think' Slide	..	..	150
FIGURE 25b	The 'Not Being Fair Makes the Owner Unhappy' Slide	..	..	150
FIGURE 25c	The 'Not Being Fair Makes the Child Feel Sad' Slide	..	..	150
FIGURE 25d	The 'Try Again' Slide	..	..	150
FIGURE 26	Mean Changes in Resistance Scores on the 'did do' Measure for the 3 Groups	..		192
FIGURE 27a	Description of Pre- and Post-treatment Resistance Responses on the 'did do' Measure for the DIP Group	..	..	195
FIGURE 27b	Description of Pre- and Post-treatment Resistance Responses on the 'did do' Measure for the GIP Group			196
FIGURE 27c	Description of Pre- and Post-treatment Resistance Responses on the 'did do' Measure for the No Treatment Control Group	..	..	197
FIGURE 28	Changes in the Number of Categorical Resisters After Treatment in the 3 Groups	..	..	199
FIGURE 29	Changes in the Number of Legitimate Alternative Responses on the 'Did Do' Measure for the 3 Groups	..	..	200

FIGURE 30	Mean Changes in Intrinsic Resistance Scores on the 'did do' Measure for the 3 Groups .. .. .	202
FIGURE 31	Mean Changes in Resistance Scores on the 'should do' Measure for the 3 Groups ..	204
FIGURE 32	Frequency Changes in Legitimate Alternative Responses on the 'should do' Measure for the 3 Groups .. .. .	205
FIGURE 33	Mean Changes in Intrinsic Resistance Scores on the 'should do' Measure for the 3 Groups .. .. .	207
FIGURE 34	Mean Changes in Clumsiness and Stealing Scores for the 3 Groups .. ..	209
FIGURE 35	Mean Changes in Collective Responsibility Scores for the 3 Groups .. ..	211
FIGURE 36	Mean Changes in Impulsivity Scores for the 3 Groups .. .. .	213
FIGURE 37	Mean Changes in Efficiency Scores for the 3 Groups .. .. .	214
FIGURE 38	Frequency Changes in Real-Life Stealing Responses for the 3 Groups .. ..	216
FIGURE 39	Frequency Changes in Real-Life Cheating Responses for the 3 Groups .. ..	218
FIGURE 40	Mean Changes in Resistance Scores on the 'did do' and 'should do' Measures for the DIP Group .. .. .	219
FIGURE 41	Mean Changes in Intrinsic Resistance Scores on the 'did do' and 'should do' Measures for the DIP Group .. ..	221
FIGURE 42	An Example of a Collective Responsibility Story .. .. .	267
FIGURE 43a	An Example of a Clumsiness and Stealing Story: A Boy When Doing the 'Right' Thing Breaks Many Dishes .. ..	268
FIGURE 43b	An Example of a Clumsiness and Stealing Story: A Boy When Doing the 'Wrong' Thing Breaks the Lid of a Jar .. ..	269



## LIST OF APPENDICES

		<u>Page No</u>
APPENDIX I-A	The Audio/Slide Presentation of the JHTST .. ..	256
APPENDIX I-B	The Jackson Person and Parental Reaction Test .. ..	262
APPENDIX I-C	Stephens' General Moral Judgement Tests : .. .. (1) Collective Responsibility (2) Clumsiness and Stealing	266
APPENDIX I-D	Directions for Matching Familiar Figures Test .. ..	270
APPENDIX I-E	Real-Life Stealing Test ..	271
APPENDIX I-F	The Real-Life Cheating Test ..	272
APPENDIX II-A	Description of Age, Sex, IQ and SES, Data for All Subjects ..	274
APPENDIX II-B	Individual Scores on the 'Did do' and 'Should do' Measures of the JHTST and the Scores on the JPPRT for All Subjects .. ..	276
APPENDIX II-C	Individual Scores on the General Moral Judgement Measure, the KMFFT and Real-Life Temptation Tests	280
APPENDIX II-D	Individual Scores on the 3 Resistance Cognitive Process Categories By Each of the 83 Subjects on the 'Did do' Measure of the JHTST ..	284
APPENDIX II-E	Individual Scores on the 2 Yielding Cognitive Process Categories By Each of the 83 Subjects on the 'Did do' Measure of the JHTST ..	285
APPENDIX II-F	Individual Scores on the 3 Resistance Cognitive Process Categories By Each of the 83 Subjects on the 'Should do' Measure of the JHTST ..	286

APPENDIX II-G	Individual Scores on the 2 Yielding Cognitive Process Categories by Each of the 83 Subjects on the 'Should do' Measure of the JHTST ..	287
APPENDIX II-H	Analysis of Variance of Yielding Scores on the 2 Measures of the JHTST ('did do' and 'should do') and 2 Levels of Cognitive Processes (Extrinsic, Intrinsic) ..	288
APPENDIX II-I	Analysis of Variance of Resistance Scores on the 2 Measures of the JHTST ('did do' and 'should do') and 3 Levels of Cognitive Processes (Right/Wrong, Extrinsic, Intrinsic) with Planned Contrasts ..	289
APPENDIX III-A	General Instruction Program : Temptation to Steal Stories ..	291
APPENDIX III-B	General Instruction Program : Issues and Probes ..	294
APPENDIX III-C	The Concept Assessment/Training Session .. ..	296
APPENDIX III-D	Direct Instruction Program ..	298
APPENDIX III-E	Legitimate Alternative Training	325
APPENDIX IV-A	Individual and Group Mean Pre-, Post- and Follow-up Treatment Resistance Scores for Subjects on the 'Did do' Measure of the JHTST ..	328
APPENDIX IV-B	Individual and Group Mean Pre-, Post- and Follow-up Treatment Intrinsic Resistance Scores for Subjects on the 'Did do' Measure of the JHTST	330
APPENDIX IV-C	Individual and Group Mean Pre-, Post- and Follow-up Treatment Resistance Scores for Subjects on the 'Should Do' Measure of the JHTST ..	332
APPENDIX IV-D	Individual and Group Mean Pre-, Post- and Follow-up Treatment Intrinsic Resistance Scores for Subjects on the 'Should do' Measure of the JHTST	334

APPENDIX IV-E	Individual and Group Mean Pre- and Post-Treatment Clumsiness and Stealing Scores for Subjects on the General Moral Judgement Measure	336
APPENDIX IV-F	Individual and Group Mean Pre- and Post-Treatment Collective Responsibility Scores for Subjects on the General Moral Judgement Measure	338
APPENDIX IV-G	Individual and Group Mean Pre- and Post-Treatment Impulsivity Scores for Subjects on the KMFFT ..	340
APPENDIX IV-H	Individual and Group Mean Pre- and Post-Treatment Efficiency Scores for Subjects on the KMFFT ..	342
APPENDIX IV-I	Individual Pre- and Post-Treatment Real-Life Stealing Scores for All Subjects .. ..	344
APPENDIX IV-J	Individual Pre- and Post-Treatment Real-Life Cheating Scores for All Subjects .. ..	346
APPENDIX IV-K	Analysis of Covariance on Post-test Resistance Scores on the 'Did do' Measure of the JHTST for the DIP, GIP, and No Treatment Control Groups, Using the Pre-test Scores as the Covariate .. ..	348
APPENDIX IV-L	Analaysis of Covariance on Post-test Intrinsic Resistance Scores on the 'Did do' Measure of the JHTST for the DIP, GIP, and No Treatment Control Groups, Using the Pre-test Scores as the Covariate ..	349
APPENDIX IV-M	Analysis of Covariance on Post-test Resistance Scores on the 'Should do' Measure of the JHTST for the DIP, GIP and No Treatment Control Groups, Using the Pre-test as the Covariate	350
APPENDIX IV-N	Analysis of Covariance on Post-test Intrinsic Resistance Scores on the 'Should do' Measure of the JHTST for the DIP, GIP, and No Treatment Control Groups, Using the Pre-test Scores as the Covariate ..	351

APPENDIX IV-O	Analysis of Covariance on Post-test Clumsiness and Stealing Scores on the General Moral Judgement Measure for the DIP, GIP and No Treatment Control Groups, Using the Pre-test Scores as the Covariate ..	352
APPENDIX IV-P	Analysis of Covariance on Post-test Collective Responsibility Scores on the General Moral Judgement Measure for the DIP, GIP, and No Treatment Control Groups, Using the Pre-test Scores as the Covariate	353
APPENDIX IV-Q	Analysis of Covariance on Post-test Impulsivity Scores on the KMFFT for the DIP, GIP, and No Treatment Control Groups, Using the Pre-test Scores as the Covariate ..	354
APPENDIX IV-R	Analysis of Covariance on Post-test Efficiency Scores on the KMFFT for the DIP, GIP, and No Treatment Control Groups Using the Pre-test Scores as the Covariate .. ..	355

## ABSTRACT

This thesis had two major study components, Study I was concerned with an evaluation of educable mentally retarded children's responses and cognitive processes in hypothetical temptation to steal situations, whilst Study II examined the effectiveness of treatment programs in modifying the children's behaviour in such situations.

Justification for this research emanated from the problems faced by the community in relationship to stealing.

In Study I the sample, which consisted of 83 eleven to sixteen year old children, I.Q. 50-75, was randomly selected from a population of 108 children in special schools in Tasmania. The children were administered a series of tests including Jackson's Hypothetical Temptation to Steal Test (JHTST) and real life temptation measures. The major findings indicated that there was a significant discrepancy between the children's resistance responses on the behavioural ('did do') measure compared to the moral judgement ('should do') measure of the JHTST. The cognitive operations were analysed in terms of extrinsic, intrinsic and right/wrong cognitive processes. It was found that extrinsic yielding processes were used significantly more than intrinsic processes on both the 'did do' and 'should do' measures. A significantly greater number of children used right/wrong resistance processes on the 'did do' measure compared to extrinsic or intrinsic processes. There was no difference between right/wrong and extrinsic processes on the 'should do' measure.

As a result of the findings from Study I a treatment program was designed. An evaluation of this treatment program constituted the basis for Study II. The treatment derived its main aspects and content from Jackson's (1968) model of cognitive processing in hypothetical temptation to steal situations. The content and format of the treatment owed much to a study done by Haines, Jackson and Davidson with normal children in 1980.

Study II, which was based on the same population pool of 108 children Study I drew from, employed a four group design with one group receiving a direct instruction program (DIP). A second group, serving as an alternative treatment condition received a general instruction procedure (GIP), while a third group (no treatment control) experienced no specific intervention. The fourth group was a post-only control group employed to test for sensitization of testing effects.

An analysis of the data from Study II indicated that the DIP group used both resistance responses and intrinsic resistance processes significantly more than the GIP and no treatment control groups on the behavioural measure of the JHTST. A three month follow-up probe indicated that the gains made by the DIP group were maintained.

The implications of the study for the prevention of stealing were considered.

## CHAPTER 1

## INTRODUCTION

Stealing is a steadily increasing problem in the community (Australian Bureau of Statistics, 1978; Challinger, 1977).

Detected theft has been identified as the most prevalent class of juvenile delinquency (Belson, 1975). Also self-report measures used amongst the general population of juveniles have indicated that almost all juveniles recall having stolen at least once in their lives (Belson, 1975; Jackson, 1975).

Although a breakdown of the statistics on juvenile theft into retarded and non-retarded offenders has not been readily available for analysis, researchers have indicated that both groups of children are represented in the juvenile court records (Challinger, 1974). Also it has been established from a two year longitudinal study, that there is approximate equivalence in the moral conduct of non-retarded and retarded children of comparable mental age (Moore and Stephens, 1974). These data suggest that the temptation to steal is a problem common to both non-retarded and retarded children.

The consequences of the retarded adolescent stealing and being dealt with in the courts may prove to be far reaching. It has been suggested that the retarded offender is confronted with special problems in the juvenile courts. The agents of the system have received little if any training in mental retardation. Consequently in lieu of a competent justice system being administered the "system may become incompetent due to lack of knowledge and expertise, and the mentally retarded individual

may not be properly served" (Schilit, 1979). Further many retarded juveniles have suffered the grave inadequacies of a system that has permitted their exclusion from any appropriate rehabilitation programming (Rowan, 1976).

In a study of delinquent youths reported by Rowan (1976), it was shown that mentally retarded offenders had a lower self-concept than their more intellectually advanced delinquent peers. The data also indicated that the mentally retarded youths used an external locus of control in that they tended to look to others for approval and "were more likely to see what happened to them not as a result of their own actions, but as a result of chance or the whims of others: (p. 655). The study concluded that a vast number of mentally retarded youths who would otherwise become juvenile offenders could avoid the fact if they were given responsibility training and sufficient skills to meet the complexities of daily living. It has also been suggested that such training should make use of individualised behavioural objectives, precision teaching techniques, and positive reinforcement systems (Rowan, 1976). It follows that retarded children should be taught the skills to cope with problems, such as stealing.

This study has grown out of an awareness of the above research findings as well as a number of other concerns and observations of which the following are perhaps the most significant :

(i) Parents, teachers, and trainers of the retarded have expressed the view that stealing presents a considerable problem.



(ii) The nature of stealing has not been clearly or systematically delineated and as a consequence the modification of stealing behaviour has been hindered.

(iii) Unwittingly individuals involved with the retarded have devised ad hoc programs which may exacerbate a stealing problem.

(iv) The most cogent reason for a detailed understanding of retarded children's responses in temptation to steal situations is that programs relating to such behaviours may be built into curriculum development programs. This of course would necessitate some form of objective evaluation of these kinds of programs before they could be implemented on a wider scale.

From the above concerns and observations it can be deduced that an investigation of the nature of stealing should logically precede the construction of treatment programs. An analysis of the nature of stealing reveals that stealing consists of two phases :

(a) The temptation phase - wherein the child is in a state of conflict as to whether to resist or yield. The resolution of the conflict often involves a complex set of interacting variables, including developmental and learning history factors, social influences, psychological and physiological needs, and the immediate parameters of the situation. As many of these variables have not been studied with respect to retarded children and resistance to temptation, it is hoped that this research will add to and encourage such investigations.

(b) The outcome phase. The cognitive activity generated during the temptation phase leads to certain outcomes. Since the outcomes may be positive (resistance) or negative (yielding), an investigation of the pre-outcome activity as well as the outcomes per se is essential.

Jackson (1968) using hypothetical temptation to steal situations has reported this type of investigation with a sample of normal children. Study I in this research will involve the analysis of the responses and cognitive operations of educable mentally retarded children in hypothetical temptation to steal situations. The data from Study I will be examined with a view to the development of a resistance to stealing program. Study II in this thesis will involve the actual construction and evaluation of such a resistance program with educable mentally retarded children.

To date there has been a paucity of research in the area of the prevention and treatment of stealing in the retarded. A few studies have reported the treatment of profoundly retarded persons who have stolen food in an institutional setting (Azrin and Armstrong, 1973; Azrin and Wesolowski, 1974; Barton, Guess, Garcia and Baer, 1970). However, a community based program for teaching retarded children resistance to stealing in a variety of everyday situations does not appear to have been constructed. The majority of attempts at the treatment of stealing have dealt with normal persons. Such attempts have included social reprogramming (Reid and Patterson, 1976), contingency management programs (Switzer, Deal and Bailey, 1977) numerous programs generated from within the corrective services

domain (Wax, 1977), and cognitive-behaviour modification programs (Guidry, 1975; Stumphauzer, 1976).

As theft is a difficult behaviour to detect, programs which offer the child cognitive strategies to guide his decision making processes and subsequent behaviour independent of external supervision would appear to be highly appropriate. In support of this statement research within the framework of resistance to temptation has reported the use of cognitive intervention strategies in the effective facilitation of resistance in delay of gratification situations with pre-school children (Patterson and Mischel, 1976). Research has also shown that self instruction has been effective in modifying a range of behaviours including 'cognitive impulsivity' (Finch, Wilkinson and Nelson, 1975), 'behaviour problems' (Moore and Cole, 1978) and problem solving skills with retarded children (Ross and Ross, 1973, 1978). These findings suggest the applicability of cognitive intervention strategies with retarded children. Furthermore a cognitive-behavioural program, drawing from Jackson's (1968) content analysis of children's cognitive operations in temptation to steal situations and put into a direct instructional format by Haines, Jackson and Davidson (1980), was shown to be significantly more effective than a general instruction program in facilitating normal children's resistance behaviour. Also, research in other areas of skill development with retarded children has demonstrated the greater efficacy of direct instruction teaching methods relative to more general methods of instruction (Becker and Carnine, 1978).

These data add to the feasibility of implementing a cognitive-behavioural program to increase resistance to stealing in the retarded. Such a program forms the aim of Study II in this research.

IN SUMMARY this thesis will be divided into two studies :

1. Study I will consist of an exploration of the responses and cognitive processes of educable mentally retarded children in hypothetical temptation to steal situations.

2. Study II will consist of the generation and evaluation of a treatment program designed to increase the resistance to the temptation to steal among educable mentally retarded children.

Educable mentally retarded children have been referred to as those who can be taught the basic academic subjects and have been classified as within the IQ range, 50 to 75 (Hallahan and Kauffman, 1978). This IQ criterion has been applied to children engaged in the present research.

As a consequence of the two study format of the thesis the literature related to each study will be reviewed separately.

## LITERATURE REVIEW TO STUDY I

## CHAPTER 2

### DEFINITION AND NATURE OF STEALING

#### 2.1 DEFINITION OF STEALING

Stealing can be defined from a legal, social, or moral perspective. Legally, stealing is regarded as a violation of the law. Socially it is a form of rule-breaking, or non-conformity to socially accepted behaviour in society. From a moral perspective stealing is viewed in terms of universal human rights (Kohlberg, 1976a). For example, the right to life takes precedence over property rights, and if a person thinks it is right to steal in order to save his friend's life then this action may be regarded as morally correct, but legally and socially incorrect. In many cases, however, legal and social rules are based on what is considered to be morally right.

Nevertheless, some researchers have criticised findings from resistance to temptation studies arguing that they indicate children's social conformity rather than morality (Aronfreed, 1974; Kohlberg, 1976a). Jackson (1968) referred to this issue in a study on children's behaviour in hypothetical temptation to steal situations. He suggested that children's resisting or yielding responses were motivated by either intrinsic or extrinsic concerns. Intrinsic concerns related to a consideration of the other person and so could be regarded as moral responses. Extrinsic concerns were characterised by self-gratificatory and self-protective responses, and accordingly could not be referred to as strictly moral.

While recognising the morality/conformity issue, Jackson (1968) delineated the parameters of his study by operationally defining stealing. Similarly, the current study will present an operational definition of stealing :

'Stealing is defined as taking something that does not belong to you without the permission of the owner'.

## 2.2 THE NATURE OF STEALING

One way to view the temptation to steal paradigm is to see it as a problem situation. The first phase of the problem can be conceptualised as the temptation phase, and the second, as the outcome phase.

### The Temptation Phase

The context of a valid temptation to steal situation has been delineated by Jackson (1968, 1978a). He suggested four ingredients :

- " (i) a person who desires an object or goal;
- (ii) the goal must be difficult to acquire legitimately;
- (iii) a prohibition has to exist on either (a) reaching the goal other than by legitimate means; or (b) the goal state even though it may be legally sanctioned, for example, killing in times of war;
- (iv) the person should not be unreasonably coerced to act immorally. For example, being told to steal on pain of death if he does not." (1978a, p.108).

In this kind of temptation situation the child is confronted with a double approach-avoidance conflict. Both alternatives,

"either yield to temptation or resist temptation, appear as approach tendencies, but the necessity of relinquishing one of the alternatives in order to pursue the other may instigate a tendency to avoid the one which is approached" (Grinder, 1961, p. 680).

During the temptation phase, the resultant conflict builds up tension in the child's system. He experiences a heightened state of cognitive activity which involves him in the processing and evaluation of the factors related to the temptation. A reduction in the state of tension in the child is achieved when he reaches a decision to resist or yield.

#### The Outcome Phase

This phase is a direct result of the cognitive activity generated in the temptation phase, and is represented by the child's final response to steal, or resist the urge to steal. As the outcome phase is functionally related to the temptation phase, an analysis of the factors influencing the child's thinking during the temptation phase is essential.



## CHAPTER 3

### FACTORS RELATED TO RESISTANCE TO TEMPTATION AND THE TEMPTATION TO STEAL

The findings from the literature on resistance to temptation and the temptation to steal, per se, will be discussed in relation to :

- (i) Developmental factors
- (ii) Demographic variables
- (iii) Parental and personal variables
- (iv) Sex differences
- (v) Observation of models
- (vi) Cognitive factors and self-control
- (vii) Context specific factors,
- (viii) An argument for generality

#### 3.1 DEVELOPMENTAL FACTORS

Cognitive developmental theorists have conceived of moral development as proceeding through a step-wise, invariant, irreversible sequence of stages, each characterised by a separate type of moral reasoning (Kohlberg, 1976a; Piaget, 1977). In contrast, social learning theorists have described moral learning as progressing from a simple set of rules to a more complex set of rules (Bandura, 1977; Zimmerman, 1978). The fundamental importance of skills or rule hierarchies is that they are teachable to children including the retarded.

Stephens and her colleagues at Temple University conducted a two year longitudinal study to assess retarded and non-retarded children's moral development. This series of studies used primarily Piagetian measures to assess moral judgement, and real-life temptations, including the temptation to steal, to assess moral conduct. The overall findings of these studies indicated the developmental nature of moral judgement (Mahaney and Stephens, 1974), and moral conduct (Moore and Stephens, 1974) in both retarded and non-retarded children. However, there were oscillations in the performances of both groups.

It was also found that there was approximate equivalence between the performances of retarded and normal children of similar mental age. Taylor and Achenbach (1975) produced a comparable finding when they assessed cultural familial retardates and normal children. In contrast to these findings, Kohlberg and Gilligan (1971) have suggested that, as moral functioning is based on a combination of cognitive and social factors, then it could be assumed that retarded children should be functioning at a somewhat higher moral level than normals of the same MA. Kahn (1976) attempted to design a study with non-retarded, and mildly and moderately retarded children to test this assumption. The results from the study were ambiguous, lending support to Kohlberg and Gilligan's (1971) assumption and to the findings reported in the Taylor and Achenbach (1975) study as well as Stephen's research conclusion. Accordingly the issue requires further research.

In sum, the developmental variables of chronological age and mental age are functionally related to some extent to moral behaviour, including resistance to temptation. In particular it has been established that cognitive competency (as measured by mental age and IQ tests) tends to be among the best indicators of 'honesty of conduct' (Hartshorne and May, 1928; Mischel and Mischel, 1976). However, other researchers report that the developmental change is in the direction of greater consistency and stability rather than greater virtue (Wright, 1971). Further longitudinal studies are suggested.

### 3.2 DEMOGRAPHIC VARIABLES

A substantial amount of evidence has indicated that crime rates are higher among the working class (Challinger, 1971). Also it has been found that children's capacity to accurately decide right from wrong was related to social class and stealing (Jackson, 1979). The relationship between social class and theft however appears to be complex and must be treated with caution. For example, Belson (1975) using a self-report methodology tapped what he referred to as 'actual' as distinct from 'detected' theft among boys. His findings indicated that stealing occurred to a substantial degree right across the occupational spectrum. A similar result emerged from an analysis of educational levels to stealing.

A significant study attempting to sort out social class from parental factors was conducted by Kitano (1967). He found that family interactions could operate as the major source of

stress. This finding is consistent with others reported in the literature (Bandura and Walters, 1963; Reid and Patterson, 1976).

### 3.3 PARENTAL AND PERSONAL VARIABLES

#### Parental variables

During the early parent-child disciplinary encounters, the parent of the normal or retarded child transmits many physical and verbal messages to inform the child how he should or should not behave. The disciplinary techniques parents employ do not appear to be unidimensional, but typically contain elements of power assertion, love withdrawal, and occasionally induction (Hoffman, 1977). It has been suggested that the most effective disciplinary encounter would include a degree of power assertion and love withdrawal as a motive-arousal mechanism to get the child to halt what he is doing, attend to the parent, and process the information contained in an inductive message. Accordingly an optimum-arousal/cognitive information model has been suggested.

Jackson (1979) has also referred to a similar kind of emotive/cognitive informational type theory in explaining his findings, of greater resistance in temptation to steal situations by girls compared to boys. He suggested that differential parental disciplinary patterns may account for the significant difference in resistance between the sexes. He found boys reported significantly more than girls that their parents shouted and smacked them when they offended. Whereas girls perceived that their parents talked quietly and explained the

implications of their actions when they offended. Jackson (1979) inferred from these findings that the parents were "giving the girls simultaneously a more intelligent cognitive map to guide their behaviours ... and a more stable emotional equilibrium ..." (p.22). As the boys experienced 'emotional noise', due to being shouted at and smacked, it could be expected that the cognitive clarity of any disciplinary message directed to them would be reduced.

It would seem from Hoffman's and Jackson's theoretical analyses that inductions ordinarily achieved the best balance of emotional and cognitive factors and therefore represent an effective technique in the discipline encounter.

Research has suggested that the normal child could be expected to have acquired sufficient cognitive skills by approximately five years of age to benefit from induction (Baumrind, 1975). Parents of retarded children could also employ inductive disciplinary techniques, but as with the parents of the normal child would have to delay their implementation until the child was able to comprehend them.

#### Personal variables

The data on normal children have thrown up a number of personal factors strongly related to stealing. These included: permissiveness of stealing, a desire for 'fun' and excitement, truancy, and a belief by the child that he would not get caught (Belson, 1975). Also the ability to accept blame for having done a wrong act has been correlated with low stealing scores (Jackson, 1979). Those children who felt that getting caught

was bad luck yielded significantly, while those children who engaged in restitutional behaviour, and felt sorry and apologised tended to minimise their stealing. Personal variables are further influenced by sex differences.

### 3.4 SEX DIFFERENCES

From a review of the findings from a number of studies Wright (1971) reported that some experiments showed no sex differences, others were in favour of girls. Jackson (1979), as mentioned, indicated that girls resisted the temptation to steal significantly more than boys. Hoffman (1975) claimed that females gave strong evidence of having a more internalised moral orientation than males.

Other studies have shown however, that there is a trend for females to 'steal' more than was previously reported (Fielding 1977; Haines, Jackson and Davidson, 1980). That is, the gap between male and female stealing is lessening, although males still steal more than females.

### 3.5 OBSERVATION OF MODELS

There has been an absence of reported studies on the relationship between the retarded and the influence of yielding and resisting models on their resistance to temptation behaviour.

Early studies with normal subjects found little support for the hypothesis that resistance to temptation could be facilitated by observing a resisting model. In fact, Stein (1967) found that the inhibiting effects of observing a yielding

model were more potent than the inhibiting effects of witnessing a resisting model.

Effects of inconsistent models have been explored by Stein and Bryan (1972). In this study, third and fourth grade girls viewed a televised ten year old model who verbally encouraged either conformity or violation of rules governing self-reward and who actually conformed to or violated the rules. Subjects who witnessed a model who 'espoused' as well as adhered to the rules exhibited greatest resistance to inappropriate reward, while those who viewed a model who 'espoused' conformity but practised rule transgression showed an intermediate degree of rule violation. Subjects who had viewed a model who preached cheating but practised rule adherence and vice versa demonstrated lowest resistance to temptation.

Thus behavioural transgression increased over the rate established for either consistent rule violation or rule adherence when children witnessed inconsistency between verbal and behavioural communications.

A series of more recent studies has attempted to demonstrate a clearer effectiveness of observing a resisting model (Bussey and Perry, 1977; Grusec, Kuczynski, Rushton and Simutis, 1979; Perry, Bussey and Perry, 1975; Toner, Parke and Yussen, 1978). Bussey and Perry (1977) revealed that a resisting-model was effective, but whenever a responsible alternative behaviour was modelled or made available to the subject the resisting-model effect was diminished. Although Perry et al (1975) have shown that resisting-models facilitate inhibition, their studies

do not address the problem of the disinhibiting strength of yielding models.

Grusec et al (1979) designed two experiments with yielding and resisting models. In the first study, four to five year old children were tempted to deviate by 'Charlie, a talking table'. 'Charlie', a tape recorder located under a table laden with toys tempted each child to abandon an assigned task and play with the toys. Overall the measures used lent support to the position that resisting models can be as influential in modifying behaviour as are yielding models. In the second study with subjects of five to eight year old children, a young woman was used to tempt the children. The results for the resisting model were not consistent and depended on the measure employed. The addition of a rationale was necessary to improve conformity ratings. The rationale consisted of the model verbalising when he thought he should continue performing his set task.

This finding suggests that the power of resisting models can be increased if they use a 'rationale' to guide their responding. Similar findings have been found in the literature on punishment strategies (Parke and Murray, 1971) and self-control in children (Bosserman and Parke, 1973; Mischel and Patterson, 1976).

### 3.6 COGNITIVE FACTORS AND SELF-CONTROL

Mischel and Mischel (1976) and Aronfreed (1968, 1976) have stressed the ways representational thought and related affective processes can establish control over conduct. The



resistance to temptation literature similarly substantiates the executive role which cognitive processes, coupled with their affective loadings, play in directing a normal child's decision-making processes and controlling his behaviour.

Indeed a growing body of research has attempted to study resistance to temptation within a self-control model (Fry and Preston, 1979; Karoly and Briggs, 1978). The ways these attempts relate to the treatment of stealing will be examined in Study II of the thesis. The discussion which follows will focus on resistance to temptation and self-regulatory strategies.

In resistance to temptation situations of the delay of gratification kind, the individual may be faced with strong temptations and situational pressures for long periods, and without the aid of any obvious external rewards or supports (Mischel and Mischel, 1976). In order to cope with the dilemma the individual could decide to activate self-regulatory strategies to help organise rules or plans for the sequencing and terminating of complex behavioural patterns necessary for achieving his goal.

The functions of self-regulatory systems in delay of gratification situations can be referred to within a two stage model (Kanfer, 1976; Mischel, 1974). In the first stage, which Kanfer referred to as 'decisional' self-control, a choice is made to seek larger delayed rewards or to obtain immediately available smaller rewards. If a decision is made to seek larger delayed rewards, then the second stage, protracted self-control, emerges. With reference to this two stage model of

self-regulation and the retarded Litrownik, Franzini, Geller and Geller (1977) stated that, "if we attempt to develop more independence (self-regulation) in retarded children, we must include training in both decisional and protracted self-control" (p. 149).

#### The Concept of Self-Control and The Retarded

It should be noted that the terms 'self-control', 'resistance to temptation', 'immediate versus delayed gratification', and 'self-regulation', present overlapping concepts with a common meaning in certain situations. Indeed Pressley (1979) has defined delay of gratification as a form of resistance to temptation. Also self-control has been described as a process through which a person becomes the principal agent for regulating his own behaviour (Goldfried and Merbaum, 1973). Accordingly the aforementioned terms would appear relevant when discussing temptation to steal situations.

The intellectually retarded person has been typically characterised as being unable to control his own behaviour (Kurtz and Neisworth, 1976). Instead he has been represented as being dependent on others (Mahoney and Mahoney, 1976), and as adopting an outer-directed problem solving orientation (Zigler, 1966). Litrownik et al (1977) attempted to examine decisional self-control in a group of retarded adolescents in a sheltered workshop. An important aspect of the study was to improve the retardates' comprehension of time perspectives. This aspect was included because research has shown that an accurate time perspective facilitates self-control (Mischel,

1974; Schack and Massati, 1973).

In the study each subject was presented with two choices (verbal and actual) at four delay conditions. The decisional options involved a choice between a smaller immediate reward and a larger delayed reward. The eight delay choices were presented to the subject one per day after they had spent one to two minutes completing a simple sorting task. The choices were verbal or actual and were presented the same way, "Would you rather have (1,10,30,60) minutes"? Each subject in a time experience group was told, "I'll be back to get you in (1,10, 30,60) minute(s)". The experienced interval on each day was always the same as the delay interval involved in the choice situation for that day. The results suggested that decisional self-control can be reliably and validly assessed via verbal reports and that this aspect of self-control, which is a prerequisite of self-regulation, can be facilitated through prior clearly labeled experience with delay intervals. The results, however, did not determine definitely whether improved time comprehension and/or belief that the rewards would be obtained were responsible for the increases in decisional self-control. The program was an appropriate first step to develop self-control skills (i.e. delay of gratification). There has been some evidence (Magy, 1975) suggesting that temporal experiences might also facilitate waiting (i.e. protracted self-control). In a later series of studies Litrownik et al (1977, 1978) also demonstrated that trainable mentally retarded children could learn self-monitoring, and self-reinforcement

skills. Both types of skills have been shown to facilitate the self-regulation process (Bandura, 1977).

Within the resistance to temptation framework self-regulation implies a certain consistency of responding across situations. However, the characteristics of the situation may override an individual's self-regulatory strategies and be the major determinant of his responding.

### 3.7 CHARACTERISTICS OF THE SITUATION

The major finding of the classic Hartshorne and May (1928) studies indicated that children's responses were characterised more by their specificity than generality. Mischel and Mischel (1976) have reported that correlational and experimental studies also suggest the discriminative nature of behavioural responding. In accord with these findings, Jackson's (1968) data on children's behaviour in hypothetical temptation to steal situations demonstrated the variability of children's responses across situations. Penner, Summers, Brookmire and Deptke (1976) using a lost dollar as a temptation stimulus in a laboratory and field settings, revealed that significantly more subjects returned the dollar in the laboratory situation.

Situational influences in resistance to temptation contexts have also included the degree of positive regard for the loser of an item (Gross, 1975; Hornstein, Masor, Sole and Heilman, 1971), the status of the owner (Brickman, 1974), the size of an organised business (Smigel, 1970), the degree of detectability and the costs to the subject in terms of a

negative personal evaluation (Penner et al, 1976), and so on.

From the foregoing analysis of resistance to temptation data it would appear that children's responses are determined by a complex interaction of person and situation type variables. Further, the weight of evidence has suggested that situational variables account for a greater proportion of the variance of responding than do person variables. Despite the overwhelming nature of these findings an argument can be constructed to allow for a re-evaluation of the influence of person variables.

### 3.8 AN ARGUMENT FOR THE GENERALITY OF RESPONDING

The mounting theoretical and empirical evidence for the influence of cognitive processing over behavioural responding has led to a review of the specificity versus generality debate. Burton (1963) factor analysed the six most reliable cheating tests in the Hartshorne and May (1928) study and found some support for a 'generality' dimension. He also found an increase in generality with age. In offering a theoretical perspective to his finding, Burton suggested that the degree of generality found could be explained in terms of a learning model. This model refers to two gradients, (a) a cognitively mediated generalisation gradient wherein the greater the cognitive, especially verbal, association between two kinds of situations, the greater will be the probability of the same response. Hoffman (1977) suggests that in very young children generalisation takes place on the basis of common stimulus elements. However,

after four or five years of age, when cognitive mediation becomes possible, generalisations begin to occur on the basis of conceptual similarity.

Although Mischel and Mischel (1976) have demonstrated the specificity of behaviour, their theoretical position also offers a basis for the degree of generality found in responding. For instance, these authors have implied that the degree of generality a person displayed may, in part, be facilitated by his 'enduring expectancies', 'cognitive consistency' and 'self-regulation' skills.

The notion of enduring expectancies suggests a degree of consistency of responding across situations. Mischel and Mischel (1976) maintained that if consideration for others is practised in both moral and wider social contexts then such responding would serve to generate enduring expectancies regarding the positive consequence of mutually helpful behaviour and thus increase the probability of its occurrence.

The construction of cognitive consistency referred to the way individuals encoded and categorized events. The explanation for this phenomenon may be found in the way people tend to reduce cognitive inconsistency, and in general, to simplify information so that they can deal with it. It would appear that cognitive consistency is facilitated by selective attention and coding processing which integrates new information into existing cognitive structures. After the information has been integrated with existing cognitive structures and become

part of the long term memory it remains enduringly available and exerts further stabilizing effects.

Also Mischel and Mischel (1976) believed that the individual was capable of using his cognitive structures to help him develop self-regulatory systems. By virtue of the nature of a self-regulatory system it would be reasonable to expect that if a person could form plans for behaving, and was able to display sufficient self-control then it would be possible for him to exert stabilising influences over his behaviour, and thereby facilitate a greater degree of consistency in responding.

Researching from within an attribution theory perspective Markus (1977) has also referred to cognitive structures which help to guide and standardise responses across situations. These structures were described as self-schemata, and were defined as "cognitive generalisations about the self, derived from past experience, that organize and guide the processing of self-related information contained in the individual's social experiences" (p. 64).

Specifically the concept of self-schemata implied that information about the self in some area (e.g. moral) had been categorised or organised and that the result of this organisation was a discernable pattern which may be used as a basis for future judgements, decisions, inferences or predictions about the self... The research by Markus (1977) has suggested that in certain areas, for example, dependence-independence, some people have well developed self-schemata and others do not.

Furthermore statistically significant behavioural differences were shown between those with schemata and those without schemata.

In addition to the above theoretical perspectives which indicate in general the possible mechanisms which control cognitions and influence responding, empirical evidence from resistance to temptation studies has also suggested a degree of support for the generality position.

Support for generality, as well as specificity, was obtained by Sears, Rau, and Alpert (1965) and Nelson, Grinder and Mutterer (1969), who tested pre-school children under more controlled conditions. Sears et al (1965) found correlations ranging from 0 to .45 (most statistically significant) among six different resistance to temptation measures. Nelson et al (1969) also studies six different resistance to temptation tests and depending on the statistical procedure employed, anywhere from about 15 to 20 percent of the variance in the test scores appear to be due to 'persons'.

Furthermore the Hartshorne and May (1928) studies on deceit have demonstrated that a very small minority of children behaved honestly (i.e. did not lie, cheat, or steal) in a range of real-life situations. Jackson (1968) using hypothetical temptation to steal situations also found a small percentage of children resisted across all situations. Similarly, Haines, Jackson and Davidson (1980) revealed that a small number of children were categorical resisters in a range of hypothetical situations, and, also resisted in a real life temptation to



steal situation. These data on stealing suggest that there are some children who acquire a 'no stealing' rule, and consistently behave in accord with their rule(s) in a range of temptation situations.

One of the questions in the first study of this research will address the issue of categorical resisters among retarded children. Additionally, a detailed review of Jackson's (1968) analysis of normal children's cognitive processes in hypothetical temptation to steal situations may extend the generality argument and suggest a methodology for investigating educable mentally retarded children's behaviour and cognitive processes in stealing contexts.

## CHAPTER 4

JACKSON'S MODEL OF COGNITIVE PROCESSES IN HYPOTHETICAL  
TEMPTATION TO STEAL SITUATIONS

From an analysis of 120 children's responses in hypothetical temptation to steal situations Jackson (1968) formulated a model of cognitive processing in such situations.

## 4.1 THE STRUCTURE OF COGNITIVE PROCESSING IN STEALING SITUATIONS

Jackson (1968) defined cognitive processes as "those mental acts generated by the individual for solving the dilemma created by the temptation situation" (p. 76). The structure and plan of these 'cognitive processes' were schematically represented by Jackson (1968) and are shown in Figure 1. The operations delineated in the figure present a temporally ordered sequential analysis of the processes encountered by children in a temptation to steal situation. Briefly explained these processes involve:

(a) Temptation Problem. This represents the conflict or dilemma confronting the child. If the child does not experience a feeling of conflict, then by definition no temptation problem exists.

(b) Sense of Dilemma. This process is characterised by the child selectively focusing on the problem, while simultaneously excluding all extraneous activity. For example, "I paused a moment".

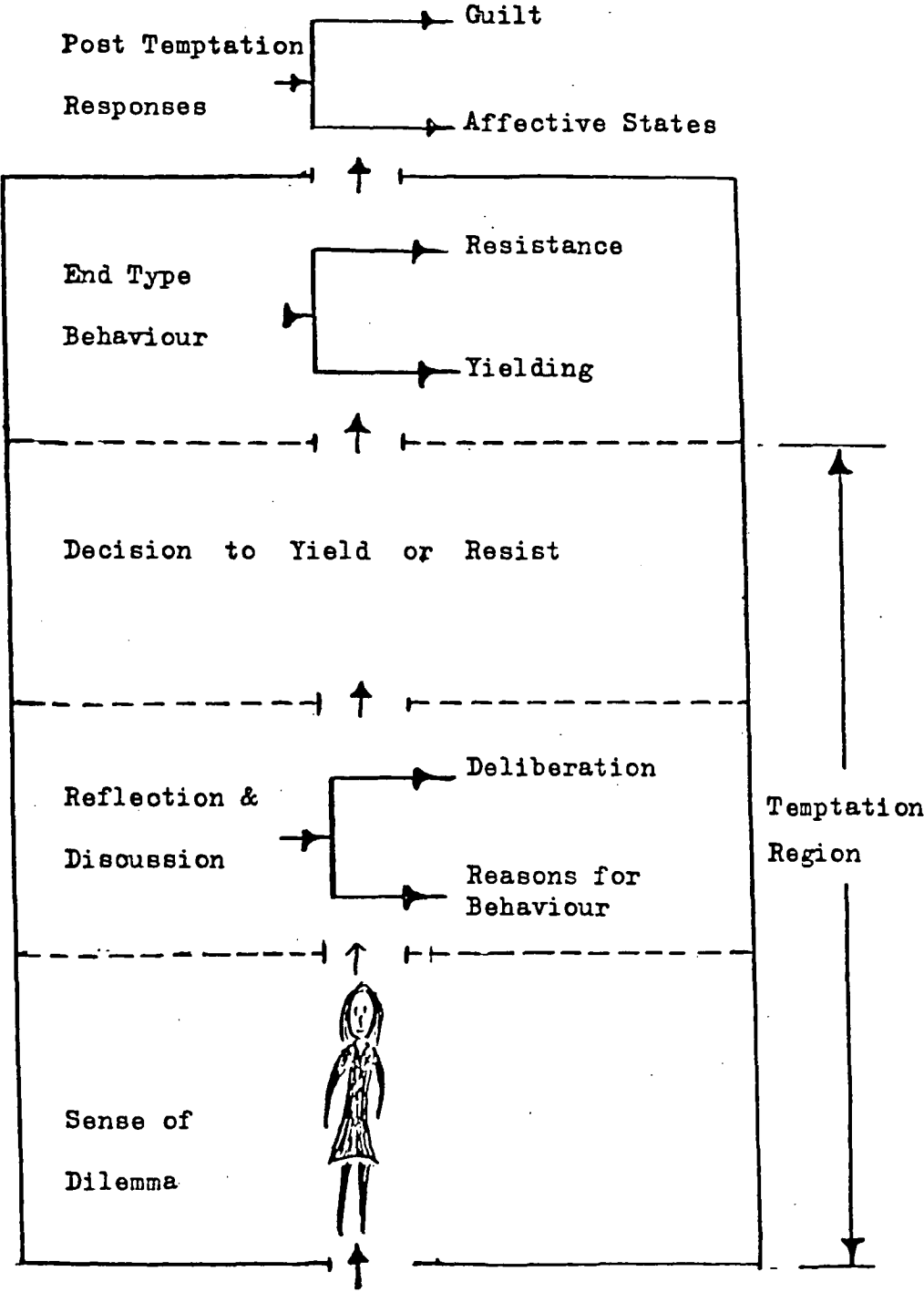


FIGURE 1      Jackson's Schematic Representation of Cognitive Processes in a Temptation Situation  
(reported by Jackson, 1968)

(c) Reflection/Self-Discussion. This stage implies that the child has a notion of the correct response and has cognitive resources to assist in decision-making. Also, that these cognitive processes are held in storage and must be retrieved. Self-discussion was referred from responses like, "I said to myself".

(d) Reference (Cognitive) Schemata. These related to the internal frames of reference which the child operated on in a temptation situation. Schemata were essentially of two types: (i) Extrinsic frames of reference which referred to externalised kinds of 'reasons' offered for yielding or resisting; an example being, "I did not take it because I might get into trouble"; and (ii) Intrinsic frames of reference which referred to a 'self-generated dynamic phenomenon'. Generally, the child indicated he had considered the other person in the situation and the consequences of his behaviour. For example, "I did not take it because it was not mine (resisting)" or "I took it to help Mum (yielding)".

(e) Decision. The child's closure on what he will do.

(f) Post-Decision Responses. Following the decision the child may emit some positive or negative affective response, "I felt good". Also a physio-motor element may quickly follow a decision, such as "I pulled my hand away".

Jackson (1968) suggested that children do not necessarily show evidence of all of these 'cognitive processing' steps. He argued that a collapsed form of cognitive processing may occur. In such a case the child was unaware of all the steps

involved, and could not articulate them, nevertheless the steps were alleged to exist.

In sum, Jackson (1968) concluded that whether abbreviated or changed somewhat in form, his model of 'cognitive processing' represented the model of responses inherent in resistance or deviant behaviour. Although the initial processing steps are necessary, the pivotal point in the chain of processes and the basis for subsequent decision making rests on the child's cognitive schemata or frames of reference.

#### 4.2 JACKSON'S COGNITIVE SCHEMATA

Jackson's notion of the way cognitive schemata were formed and applied has its underpinnings in social learning theory. In this view the individual has been conceived of as continuously integrating and organising information, and as a result, building up a highly complex system of responses with inter-related meanings. These centrally stored phenomena or categories may usefully be viewed as the basis of cognitive strategies used for handling the demands of a situation. The relationship between the stimulus situation and the individual's cognitively mediated response has been summed in the following way :

"The stimulus determines what strategy or strategies will be evoked, the content of these strategies is already determined by the previous experience of the system"  
(Newell, Shaw and Simon, 1958, p.158).

This early analysis of how external stimuli interact with the individual's cognitive system, in a sense, parallels the theory's

later notion of the way stimuli cue rule-production in the individual (Yates and Yates, 1978).

Jackson's application of social learning theory within the specific domain of stealing has led to his own particular conception of schemata related to the temptation to steal. In this stealing specific domain, he has suggested that when the individual was confronted with a temptation problem he scanned his memory for cognitive categories with information relevant to the problem. When he recognised the similarity between the demands of the problem and the information in a particular storage category or categories he would retrieve information which he would use to form the basis of strategies to solve the problem.

In the sense that the individual's cognitive categories or schemata are developed through his/her socialisation experiences, the quality and nature of the schemata may be age-related. For instance, a very young child when confronted with a temptation to steal situation may reflect on a past experience when he was punished for stealing. In Jackson's terminology the child would probably focus on a 'consequences' schema; in this case the child might say, "I will not take it because I might get caught". From this example it becomes clear that there is not a one to one correspondence or a 'match' between exactly what s/he did in the past and his/her present response. It is more the correspondence between the 'concept' of the common attributes of similar past situations and his/her present response.

Jackson (1968) analysed in detail the kinds of 'reasons' or schemata involved in yielding or resistance processes.

Yielding processes will be reviewed next.

#### Yielding Processes

Jackson (1968) in an analysis of the children's yielding processes found that they were characterised by a lower order sense of dilemma, that is, a concern about getting caught. Only relatively few subjects showed a higher order sense of dilemma, namely a concern about the propriety of the action. It followed from this analysis that, in the next stage of processing there was little reflection and discussion. The reflection that did arise involved thoughts on how to avoid detection during and following stealing.

The next stage of processing involved extrinsic and intrinsic reference schemata. One extrinsic schema was a conception that stealing was justified when there was a lack of surveillance. Another schema was linked to the magnitude of the theft, while still another involved a physical need for, say, sweets, or excitement. Other extrinsic schemata included: social pressure to be like others, a revenge motive to get even, and a feeling that there was social support for stealing, for instance, when parents accepted acts of stealing.

Intrinsic frames of reference were occasionally produced by children to justify stealing. Jackson stressed that while most reasons for stealing were of an extrinsic nature, it was possible to create a conflict situation in which it may be quite difficult for the child to decide what was the correct course of

action. In a situation where a little brother had lost a knife, the subject often justified stealing another knife by appealing to the argument that it would prevent his little brother getting into trouble. This type of reasoning was classified as based on an intrinsic frame of reference because it revealed a concern for the other person, a concern which was greater than the fear of getting caught.

The decision stage of yielding processes was deduced from the children's selective processing. For instance, only taking a few coins and leaving the rest, and by the child's use of detailed behavioural sequences, such as deciding to first put a hand near a lolly, then deciding to take the lolly slowly, and ending the decisional sequence by looking at the lollies and pretending to examine them. The final post-decisional stage often reflected the deviant subject's awareness that his behaviour was not socially accepted. This awareness was indicated by physiological correlates following the yielding response. For example, "I slipped it into my pocket quickly and walked away".

#### Resistance Processing

Resistance processing was characterised by a higher order sense of dilemma, and subsequent discussion. A range of resistance schemata were identified, and the decision and post decision stages reinforced the resistance action. As resistance schemata precede a child's decision to resist the temptation to steal they will be examined next.



Resistance schemata. As with yielding schemata, resistance schemata involved an extrinsic and intrinsic orientation. Extrinsic schemata included: 'consequences', 'model', and 'habit'. The developmental literature has demonstrated that young children evaluate actions by reference to their consequences (Bandura, 1977; Mischel and Mischel, 1976; Piaget, 1977). Jackson's (1968) data also revealed that many children focused on consequences in making a resistance decision. For example, "I didn't want to get into trouble so I didn't take it". Recent research has indicated the power of resisting models (Grusec et al, 1979). Children were regarded as using a model schema when they suggested things like, for instance, "I decided to turn away from the toy because my father would not take it". Jackson also generated a habit schema from the children's data which made some reference to a desire to resist the temptation to steal because they did not want to develop a bad habit. For example, "I don't want to steal because it may become a habit".

Resistance responses which were motivated by intrinsic schemata were held by Jackson (1968), to be the only truly moral responses. Intrinsic schemata included: internalised principle, right/wrong, self control, guilt, and self image. Internalised principle schemata consisted of those responses which were based on a notion of reciprocity. This type of response conforms to the 'golden rule' which functions as a rationale for resistance responding in a temptation to steal situation. An

example of a child's use of the 'rule' schema would be, "I thought I wouldn't take it because I wouldn't like someone to treat me like that". The right/wrong schema does not appear as sophisticated as the internalised principle schema, but does indicate the child's awareness of the wrongness of stealing. This type of schema was represented by such responses as, "I decided not to take it because it is wrong to steal". The less frequent forms of intrinsic resistance schema involved children's reference to: 'self image', for instance, "I would not take it because I am not the sort of person who steals'; 'self control', for example, "I decided to control myself", and 'guilt' by responses such as, "I would feel guilty if I took it".

A form of response not anticipated but identified by Jackson (1968) was the 'legitimate acquisition response'. Some children, instead of resisting in the sense of giving up their goal, decided to achieve their objective in a socially and morally acceptable manner. This type of response required a delay of immediate gratification in order to obtain a long term satisfaction and is therefore similar in certain ways to Kanfer (1976) and Mischel's (1974) two stage model of self control. This is clearly reflected in the following type of response, "I would save up my pocket money and get it then because what is the use of having a bracelet if you don't wear it and if you did, someone would notice". The legitimate acquisition response is seen as highly desirable as it means the

child utilises his resources to solve the temptation to steal problem. As well, this type of response does not necessitate absolute self control.

This model proposed by Jackson has provided a format for analysing the responses of normal children and in this study has been utilized in a study of the responses of mentally retarded children.

## CHAPTER 5

### METHODOLOGICAL PROBLEMS AND ISSUES IN MEASURING THE RESPONSES OF CHILDREN IN TEMPTATION TO STEAL SITUATIONS

Experimenters have attempted to measure three kinds of responding in temptation situations: (1) behavioural responses, (2) self-report responses, and (3) judgemental responses.

#### 5.1 BEHAVIOURAL MEASURES

Two kinds of behavioural responses have been assessed: (a) behavioural responses in real-life situations, and (b) simulated behavioural responses in quasi-life situations. Additionally, in the second category, children's mental operations which guide their responding have also been plotted.

##### (a) Behavioural Responses in Real-life Situations

In the classical Hartshorne and May (1928) Character Education Enquiry a range of situations were devised wherein children made an overt response which indicated resisting or yielding. For example, in one classroom cheating situation subjects scored their own tests ostensibly because the instructor was unable to do so. Unknown to the subjects recorded scores on original performance could be compared with scores they submitted. Improvements indicated cheating. Grinder (1961) generated situations in a similar manner to Hartshorne and May (1928).

The temptation situations employed by Hartshorne and May

(1928) and Grinder (1961) may place demands on younger retarded children which they cannot meet - for instance, the self-recording requirements often made in such situations. In Grinder's ray-gun game the subject was asked to take 20 shots and to record his/her score on a three-column, 20 row score sheet (Grinder, 1961). Grinder's bean bag game has fewer limitations but does require the child to be ambulant and able to throw a bean bag some 5 feet.

The types of situations so far referred to have been temptation to cheat situations used with normal children. More relevant to the particular focus of this study were Moore and Stephens' (1974) self-control or temptation to steal situations used with retarded children. In one situation a dish of candy and a packet of partially-filled cigarettes were placed on a table. During a session between the child and the examiner on another issue, the experimenter leaves the room on a pre-arranged pretext. A count of the candy and cigarettes after the child departs indicates a yielding or resisting score. Although this type of situation has a relatively high incentive goal and has no real task demands, extrapolating from a child's yielding or resistance response in one situation to a statement about the child's disposition to resist temptation causes some concern. Firstly, research data have clearly indicated the influence of situational variables on children's responses in temptation situations. It would require the assessment of a child's behaviour in a range of situations to allow for any degree of confidence in a statement about the child's propensity

to resist the temptation to steal. Secondly, the context of the situation may have a determining influence on responding. Despite all precautions to the contrary the child in a dilemma like that described by Stephens, has been placed in an artificial situation. One which he does not confront from day to day. Thirdly, the nature of the temptation stimulus is very restricted. The appeal of candy and cigarettes will vary between persons and across times. Again a range of temptation stimuli would permit a more searching evaluation of a child's self-control. In short, assessment of a child's responding in a range of everyday familiar situations, with a variety of tempting stimuli would give a reasonable indication of his/her propensity for resistance in temptation to steal situations.

(b) Simulated Behavioural Responses in Quasi-life Situations

Jackson (1968) devised a Hypothetical Temptation to Steal Test (JHTST) to examine the behaviour of children from their own perception of events. The test is based on the assumption that what the child "thinks is going on can be more important in shaping an outcome than what actually goes on" (Jackson, 1978b). It follows that to a large degree what a child thinks will tend to shape his response to events. The JHTST (1968) consists of eight hypothetical everyday stealing dilemmas. It was originally a paper and pencil test, and required the child to indicate what s/he 'did' in a situation and 'why' s/he did it. Data from the test therefore allowed for an analysis of what Jackson called the children's mental operations

as well as their behavioural responses. Behavioural responses on the JHTST were defined as what the child said s/he 'did do' in the hypothetical temptation to steal situations. A 'should do' probe was recently added to the JHTST. These responses will be referred to as 'moral judgement' responses.

Methodologically the JHTST has several advantages over the single situation real-life temptation measures:

(i) Fewer ethical constraints operate on the JHTST than the real-life measures.

(ii) The JHTST involves a range of everyday dilemmas and temptation stimuli. The lack of practical limitations on the construction and presentation of a range of situations clearly advantages the hypothetical measure.

(iii) Real-life situations often include an element of contrivance and artificiality, whereas with the JHTST the child relates to a familiar everyday context.

(iv) Relative to the real-life situation there are fewer fears of detection in the hypothetical situations.

(v) The JHTST allows for an analysis of the cognitive processes guiding the child's response.

(vi) The JHTST permits the identification of the kinds of situations in which a child might yield.

(vii) The JHTST is presented in the 'first' person. The subject is confronted with a dilemma and has to say what s/he does, not what he 'should do' (although there is a 'should do' version).

The most fundamental potential criticism of the JHTST would appear to be that it does not measure what the child would really do in a set of similar real-life situations. Although the situations in the JHTST are hypothetical, Jackson (1978b) has reported a series of validity studies which indicated that the test, reliably discriminates delinquent from non-delinquent samples and distinguishes significantly between what children say they 'should do' compared to what they 'did do'. Also, it was found that children who resisted on all situations in the JHTST, resisted in a real-life situation (Haines, Jackson and Davidson, 1980). These data add to the validity of the JHTST.

## 5.2 SELF-REPORT MEASURES

Belson (1975) has used a self-report methodology to analyse boys' stealing behaviour. An elicitation procedure, which was divided into two phases was designed. In the first phase, the boy sat on one side of the screen and was requested to sort a set of 44 cards. Each card consisted of a question relating to instances of stealing. For example, "I have pinched sweets" (card 13). The boy posted his answer in a slot on the screen labelled 'yes' or 'never'. Belson (1975) argued that the stealing items represented a 'web of stimuli' in the sense that taken together they evoked recall of stealing instances. Stringent efforts were made to assure the boys of confidentiality. In the second phase, the boy and the interviewer sat face to face. Belson indicated that this is what the boys wanted.



Three types of information were requested about the admitted thefts: the biggest thing of this type taken or done; how often the boy had ever done this class of thing; and his age when he first did it and his age on the last occasion he did it. Reassurance, probing and checking were essential parts of this phase.

A test-retest measure of reliability on the total number of 'yes' responses was acceptable ( $r = .86$ ). The elicitation procedure was not subjected to any validity measures. Belson (1975) offered criticism of his own procedure. He suggested that a boy's memory of how many times he has done various things during his lifetime may be quite unconsciously distorted in the direction of over statement or under statement each time he is questioned. Clearly, the more dated the information the greater the degree of error due to memory overload. Also the more recent the information the greater the child's fear of disclosure and possible reprisal by the authorities. These factors weigh seriously against the validity of Belson's measure.

### 5.3 JUDGEMENTAL MEASURES

A number of researchers have assessed children's moral reasoning in situations which included stealing dilemmas. It should be made clear that the interpretations of responses by these researchers do not relate to resistance or yielding, per se, but to stage levels or moral reasoning. However, as stealing can be defined as one type of moral misconduct it

would be expected that excluding the life versus stealing issue, children with a high level of moral functioning would be more likely to resist stealing than those of a lower level of moral functioning. Kohlberg's (1976a) findings that a stronger relationship exists between moral judgement and behaviour for those higher up the moral stage ladder would tend to support this assumption. A brief review of the methodological considerations of the measures of moral judgement therefore seems appropriate.

Kohlberg's Moral Judgement Scale was reported originally in 1958 and revised in 1976(b). Kurtines and Grief (1974) have criticised the validity and reliability of the original scale, particularly the scoring system. In the updated version an issue scoring system was constructed in order to meet more adequately the assumption of the invariant sequence postulate of stage theory. Research needs to be applied to Kohlberg's latest scoring system.

From the point of view of test content there remains a distinct similarity between the two versions of the scale.

Leming (1974) has commented on the content of Kohlberg's Moral Judgement stories. Leming (1974) has referred to the story content as consisting of classical dilemmas because they involve situations and characters not easily identifiable by the child. He found that practical moral dilemmas, that is, those which are familiar, elicited a significantly different level of moral reasoning compared to classical dilemmas. In discussing the implications for the cognitive developmental

approach to moral education it was argued that "for a moral education program to be maximally effective it ought to focus on naturally occurring situations within the life-space of the students" (p.24). Leming (1974) has called for an experience-based moral education program.

Although Kohlberg's Moral Judgement Scale (KMJS) has been administered to retarded persons (Taylor and Achenbach, 1975; Kahn, 1976; Rackman, 1974), an analysis of the concepts and word difficulty used in the stories and probes raises some doubts as to the KMJS applicability for younger educable mentally retarded children. This question has been empirically tested in the present research.

In contrast, the Piaget type stories used in Stephens' Temple University studies (1974) were familiar everyday situations using simple concepts and language. In many stories a pictorial representation accompanied the verbal presentation.

Bull (1969) using quasi-life situations tested children's moral judgements in a range of five situations: cruelty to animals, value of life, cheating, lying, and stealing. Children were exposed to pictorially represented stories, and asked what the character in the story (third person) 'would do'. Responses were classified within a four stage moral developmental scale (anomy, heteronomy, socionomy, and autonomy). The 'would' probe was seen as preferable to the 'should' probe because it was related to concrete situations which younger children could comprehend. On the other hand both Piaget (1977) and Kohlberg (1976b) have used the 'should'

probe to assess moral judgement.

This current study sought to examine the responses of educable mentally retarded children in stealing dilemmas, however, given the methodological advantages and limitations of the measures employed in resistance to temptation research it was decided to modify and then pilot a number of these measures on a sample of educable mentally retarded children to assess their applicability for inclusion in Study I. These pilot studies will be briefly mentioned.

#### 5.4 PILOT STUDIES

Specifically, the pilot studies were concerned with the suitability of the following measures: Kohlberg's Moral Judgement Scale (KMJS) (1976b); Jackson's Hypothetical Temptation to Steal Test (JHTST) (1968); Jackson's Person and Parental Reaction Test (JPPRT) (1968); Stephens' Moral Judgement Measures (Mahaney and Stephens, 1974); and a real life stealing and cheating test.

The pilot sample involved a small number of educable mentally retarded children randomly chosen from the population pool proposed for the study. As a consequence of these pilot probes certain modifications to the above tests were found to be necessary. In addition it was found that the Kohlberg Moral Judgement Scale (1976b) was completely unsuitable for these mentally retarded children, therefore it was rejected as a suitable measure. The modifications to the other tests will be discussed in an appropriate place within the methodological section of Study I.

STUDY I

## CHAPTER 6

AN ANALYSIS OF EDUCABLE MENTALLY RETARDED CHILDREN'S  
RESPONSES AND COGNITIVE PROCESSES IN HYPOTHETICAL  
TEMPTATION TO STEAL SITUATIONS

As previously indicated, stealing presents a considerable problem for the community, educational systems and families. Since stealing is an end product type response and management of this response is one of the major dilemmas faced by society, an examination of the nature of stealing responses should provide the essential data for preventative education.

The nature of stealing has been reviewed as a two phase process. Phase 1 represents the temptation or conflict phase and is characterised by a high level of cognitive activity. Phase 2 is the outcome phase wherein the child makes a decision to resist or yield. Jackson (1968) using hypothetical temptation to steal situations examined the responses and cognitive processes of a sample of normal children. The main purpose of Study I was to analyse the responses and cognitive processes of educable mentally retarded children in hypothetical temptation to steal situations, with the view to attempting to understand these processes with the further aim in mind to generate preventative type programs.

One of the major findings from Jackson's (1968) study was that most children responded differentially across situations. He found that the highest proportion of children resisted in what he called a "found purse" situation. Similarly, Penner et

al (1976), using a lost dollar as a temptation stimulus, found that the dollar was returned significantly more when it was placed in a labelled wallet than when it was in an officially marked envelope, or without any identification. Penner et al (1976) attempted to explain this result by referring to the relative costs that the subject incurred by keeping the dollar. They targeted three main costs which influenced the subject's decision; the costs to the owner, the costs to the thief, and the cost of a negative personal evaluation.

It is apparent from these findings that an individual's perception of the situation has a direct influence over the type of behavioural response he emits. Indeed, studies on moral conduct and moral judgement suggest that an individual's behavioural and judgement responses across situations are characterised more by their specificity than generality (Hartshorne and May, 1928; Mischel and Mischel, 1976). Although most children do seem to respond differentially across situations, Hartshorne and May's (1928) data identify a small number of children who behaved honestly (i.e., did not lie, cheat or steal) in a range of real life situations. Jackson (1968) using hypothetical temptation to steal situations also found that a few children resisted across all situations. Similarly, Haines, Jackson and Davidson (1980) revealed that a small percentage of children were categorical resisters in a range of hypothetical situations, and also resisted in a real life temptation to steal situation. These data on stealing suggest that there are some children who acquire a 'no stealing' rule,

and consistently behave in accord with their rule(s) in a range of temptation situations.

In addition to identifying categorical resisters in his data, Jackson (1968) also found that some children, instead of resisting and giving up their goal, decided to achieve their objective in a legitimate way. This kind of responding is similar in certain ways to the two stage model of self-control proposed by Kanfer (1976) and Mischel (1974). One of the aims of this study was to examine educable mentally retarded children's resistance responding for the existence of legitimate alternative strategies.

It was decided to use a range of hypothetical temptation to steal situations in lieu of a real-life temptation to steal situation as the main measure of resistance, because of certain methodological and ethical advantages. One of the key methodological advantages is that, via an oral/visual presentation probe technique, the children's cognitive processes could be obtained, recorded and analysed.

While overt responding is one measure of a response, and indeed much of the early resistance to temptation research has only monitored this kind of responding (Grinder, 1961; Hartshorne and May, 1928), recent resistance to temptation studies have described the relationship between covert and overt responding (Grusec et al, 1979; Jackson, 1968; Mischel and Patterson, 1974). Even these later studies however, with the exception of Jackson (1968), have not directly measured the actual cognitive processing the child uses in a temptation situation. In his



research, Jackson (1968) analysed the cognitive processes of children in hypothetical temptation to steal situations and subsequently generated a six stage cognitive processing model. Data from this model indicated that normal children used intrinsic and extrinsic schemata to guide their resistance or yielding responses.

An analysis of the kinds of cognitive schemata educable mentally retarded children use in hypothetical temptation to steal situations was regarded as an essential component of the present study.

Irrespective of whether children resisted or yielded in these hypothetical temptation to steal situations, Jackson (1968) stated that they went through a stage which he defined as the self-discussion and reflection phase. Since temptation to steal situations can be conceptualised as problem solving situations, and reflection is an important strategy for problem solving, it was argued that reflection may be related to resistance responding. It was therefore decided to examine educable mentally retarded children's cognitive styles. Kagan's Matching Familiar Figures (1964) test was regarded as an adequate measure for this dimension.

In an attempt to determine the kinds of factors which influence children's responses in various forms of resistance to temptation situations, researchers have examined the relationship of a range of cognitive variables, intelligence and moral judgement; developmental and demographic variables, age, sex and socioeconomic status, as well as person and parental variables,

to resistance to temptation (Jackson, 1968; Kohlberg, 1976; Mischel and Mischel, 1976; Wright, 1971). This study includes an examination of the relationship of these kinds of variables to resistance to the temptation to steal with a population of educable mentally retarded children.

Specifically, the main aim of the present study was to investigate educable mentally retarded children's behavioural and moral reasoning responses and cognitive processes in hypothetical temptation to steal situations.

## CHAPTER 7

### METHOD

#### 7.1 SAMPLE

The sample consisted of 83 educable mentally retarded children between 11 to 16 years of age, I.Q. 50 to 75, randomly selected from a population of 115 children attending special schools in the two major population centres of Tasmania (Hobart and Launceston). Parental permission was obtained for 108 of the children to be involved in the study.

#### 7.2 DESIGN

Study I had two facets to it. The first part was concerned with an examination of educable mentally retarded children's behavioural and moral judgement responses in a series of hypothetical stealing dilemmas and real-life temptation to steal situations.

The second part of Study I dealt with the cognitive processes of such children in the hypothetical stealing dilemmas.

From data specifically relevant to Jackson's (1968) study and other research findings within the resistance to temptation framework a number of expectations were held for Phase 1 of this study.

Phase 1 : It was expected that when children make a moral judgement, that is 'should do', response, they would exhibit a greater frequency of resistance responses than when they gave a

behavioural ('did do') response. Also it was anticipated that the nature of the temptation situations would significantly influence the children's behavioural, but not their moral judgement responses. Jackson (1968) found normal children resisted more in two situations as compared to the other six situations. While situational influences were expected it was recognised that other researchers had identified a few children who resisted in all situations and were known as categorical resisters (Haines, Jackson and Davidson, 1980). A similar result was anticipated with the educable mentally retarded children. It was further predicted, as was found by Jackson, that some would use legitimate alternative responses.

Phase 1 of this study sought to examine the following hypotheses and predictions.

#### Hypotheses for Phase 1

I. It was hypothesized that there would be a marked discrepancy between what children said they 'should do' (moral judgement measure) and what they said they 'did do' (behavioural measure) in a series of hypothetical stealing dilemmas.

II. As a consequence of data obtained from studies on normal children (Haines, Jackson and Davidson, 1980; Jackson, 1968) it was predicted that there would be variable responding across situations. That is, in some situations, namely Situations 1 and 4, they would be more likely to resist.

III. No difference across situations was however predicted for the moral judgement response measure.

IV. It was further expected that there would be a significant difference between the children's resistance on the behavioural measure compared to the moral judgement measure for each of the eight situations.

V. It was predicted from earlier research findings (Haines, Jackson and Davidson, 1980; Jackson, 1968) that a number of children would resist in all situations on both the moral judgement measure and behavioural measure.

VI. It was expected that a number of children would use legitimate acquisition alternatives when resisting and that such legitimate acquisition responses would be greater on the moral judgement measure than on the behavioural measure.

Two hypotheses relating to a series of independent variables: age, sex, socioeconomic status (SES), I.Q., general moral judgement, person and parental variables, and reflection/efficiency, were postulated.

VII. That the independent variables delineated above would all be significantly related to the dependent variable, resistance on the behavioural ('did do') measure.

VIII. That these same independent variables would all be significantly related to the dependent variable, resistance on the moral judgement ('should do') measure.

It was also of interest to examine the additive contribution that the independent variables would make to the dependent variables in Hypotheses VII and VIII.

In order to examine the children's responses on the real-life temptation stealing and cheating situations the following

hypotheses were tested :

IX. That there would be a significant relationship between the children's resistance on the real-life temptation to steal situation, and the hypothetical temptation to steal situations.

X. That there would be a significantly greater number of children who cheated compared to those who stole on the real-life temptation situations.

XI. That there would not be a significant relationship between children's resistance on the temptation to cheat situation and either the real life temptation to steal situation or the hypothetical temptation to steal situations.

Phase 2 : This section was confined to an analysis of children's cognitive processes on the JHTST. Jackson's (1968) analysis of normal children's cognitive processes in hypothetical temptation situations revealed two broad types of processing, intrinsic and extrinsic.

Although Jackson (1968) referred to a right/wrong schema as intrinsic in orientation, data from the pilot studies indicated that the right/wrong schema may occupy a separate position. Therefore, it was analysed as such in this study.

From a developmental perspective it was assumed that children would use extrinsic processes more than intrinsic or right/wrong processes on both the behavioural and moral judgement measures of the JHTST.

Jackson's (1968) profile of children's yielding responses revealed that in seven of his eight hypothetical temptation to steal situations most children used extrinsic cognitive processes. However, in one situation designed to evoke sympathy for the subject's little brother, most children used intrinsic cognitive processes. This type of finding may also occur with educable mentally retarded children. The children's resistance cognitive processes within each situation would be difficult to predict as the study is the first to quantitatively analyse the three different types of resistance cognitive processes.

As children's yielding responses were expected to be greater on the behavioural measure than the moral judgement measure, and yielding responses are commonly motivated by extrinsic cognitive processes, it was assumed that the children would use more extrinsic processes on the behavioural measure compared to the moral judgement measure. Also since greater resistance was expected on the moral judgement measure it would seem reasonable to argue that each of the children's resistance cognitive processes would be used more on the moral judgement measure compared to the behavioural measure.

Interactions between the behavioural and moral measures and the cognitive process categories was considered of research interest, although no direct expectations were held.

Specific hypotheses have been set out to examine the above assumptions.

### Hypotheses for Phase 2

I. That there would be a significantly higher proportion of children using extrinsic compared to intrinsic yielding cognitive processes on both the behavioural ('did do') and moral judgement ('should do') measures.

II. That there would be a significantly greater number of children using extrinsic compared to intrinsic or right/wrong resistance cognitive processes on both the behavioural and moral judgement measures.

III. That there would be a significantly higher proportion of children who used extrinsic yielding cognitive processes on the behavioural measure compared to the moral judgement measure.

IV. That there would be a significantly higher proportion of children who used extrinsic, intrinsic, and right/wrong resistance cognitive processes on the moral judgement measure compared to the behavioural measure.

V. As a consequence of data reported by Haines, Jackson and Davidson (1980) and Jackson (1968), it was hypothesized from a situational analysis: (a) that significantly more children would use extrinsic compared to intrinsic processes in Situations 2, 3, 4, 5, 6 and 8 on both the behavioural and moral judgement measures; (b) that significantly more children would use intrinsic compared to extrinsic processes in Situation 7 on both the behavioural and moral judgement measures; (c) No specific hypotheses were derived for the situational comparison of the children's resistance cognitive processes.



### 7.3 PROCEDURE

#### Measuring Instruments

1. Data concerned with the variables age, sex, I.Q. and parental occupation were obtained from the current school records.

2. Measure of Socio-economic Status (SES): Parental occupation was used as an index of SES. Specifically, the parents' occupations were located on the occupation distribution of the Australian workforce (Broom and Lancaster-Jones, 1976). Four categories were derived from this distribution: professional, managerial, and clerical occupations; skilled manual occupations; unskilled manual occupations; and a miscellaneous category, including agricultural positions and unemployed workers. The parents were allocated to one of these four categories.

Other measures used in the study will be discussed separately, including the modifications to such measures indicated from the data derived from the pilot studies. Details of all measures are shown in Appendix I - A to F.

Measures of Judgement and Behaviour in Stealing Situations: As indicated earlier Jackson (1968) had devised a test known as the Jackson Hypothetical Temptation to Steal Test (JHTST) to yield both a behavioural and a judgement measure. A description of this test is given below.

#### Jackson's Hypothetical Temptation to Steal Test (JHTST)

Version I of the JHTST consists of eight hypothetical temptation to steal situations. The following is an example of one of the situations:

Test Situation 4. "One day at the football after nearly everybody had gone I was walking past the stand when I saw a small purse under the seat. I bent down and picked it up. When I opened it I found it had one dollar 20 cents in it. There was a name on the flap but you couldn't read it very easily. I \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_ because \_\_\_\_\_  
\_\_\_\_\_."

Version 2 of the JHTST suggested by Haines (Jackson and Haines, 1980) utilizes the identical wording for each of the test situations with the exception of the last word of the test situation. In addition to the word "I" (where the subject is required to respond) the word "should" is added. The addition of this word offered an opportunity to assess the subject's moral judgement, that is, to state what s/he "should do". The validity of the "should do" version has been established in a study comparing "should do" and "did do" responses by the same subjects to the same test situation. These data indicate that normal subjects respond significantly differently to the two versions of the test;  $p < .001$  (Jackson, 1978b). Version 1 of the test has been called the "did do" version, and Version 2, the "should do" version.

The JHTST was originally constructed to be presented as a paper and pencil test. Since many of the educable mentally retarded children in the present study were not able to read and write the presentation of the test found applicable to normal

subjects needed to be changed. It was essential to preserve the characteristics of the original test such as anonymity, ease of comprehension and a recording mechanism. In addition to these aspects it was felt to be essential to (i) elicit further information upon the child's final response, and (ii) to probe for reasons for that response.

To achieve this the eight hypothetical temptation to steal situations were sketched and put on slides so that each situation would be depicted in a concrete fashion (see Figure 2a & b). Separate male and female slides were made so that each child could identify with his/her own sex.

To ensure anonymity the tester and the child were in separate rooms. This was done to minimise the experimenters' influence on the child's responding. The child was seated in front of a winged screen, to minimise distraction, on which the slides were projected (see Figure 3a). The slide projector was operated by a push button control held by the tester in the adjacent room (see Figure 3b). Communication with the child was via an audio link up by headphones. This allowed the tester to :

- (a) make sure the child could understand the temptation situations,
- (b) give the child a way of indicating his/her response,
- and (c) provide a means of probing the child's cognitive operations or 'reasons' for responding.

All of the child's responses were automatically tape recorded via a small microphone attached to the headphones.

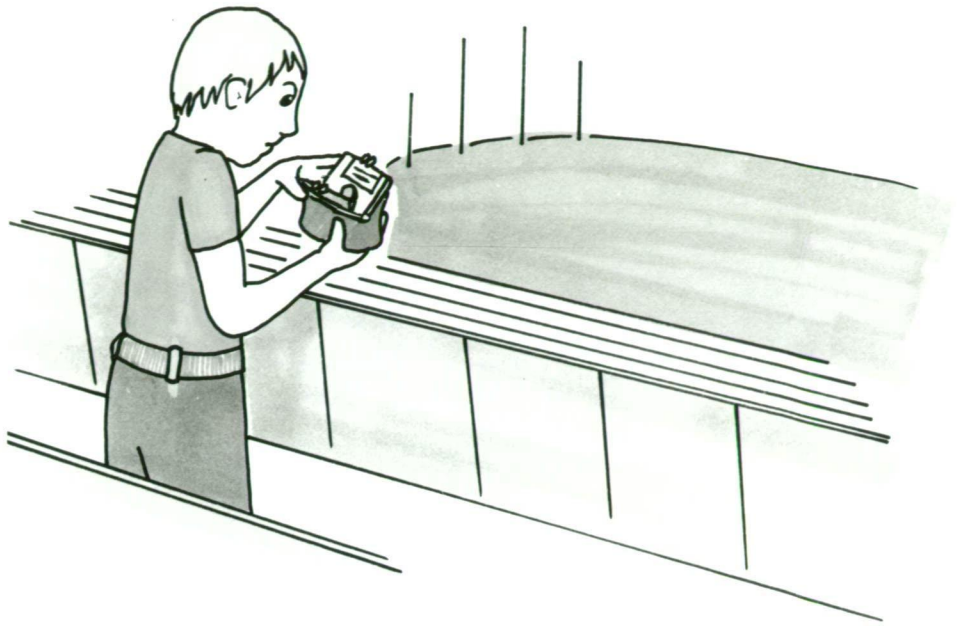


FIGURE 2A      The Lost Purse Situation

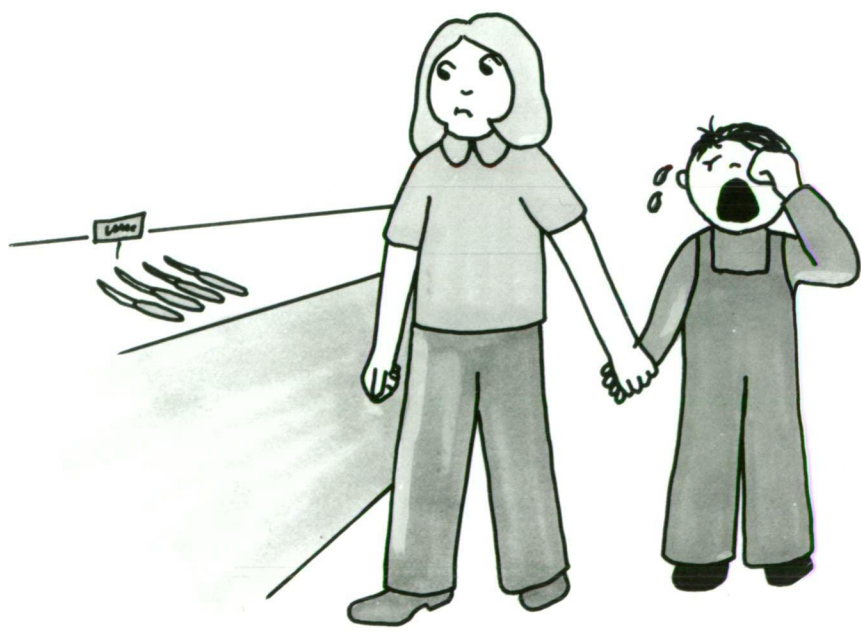


FIGURE 2b      The Little Brother Situation

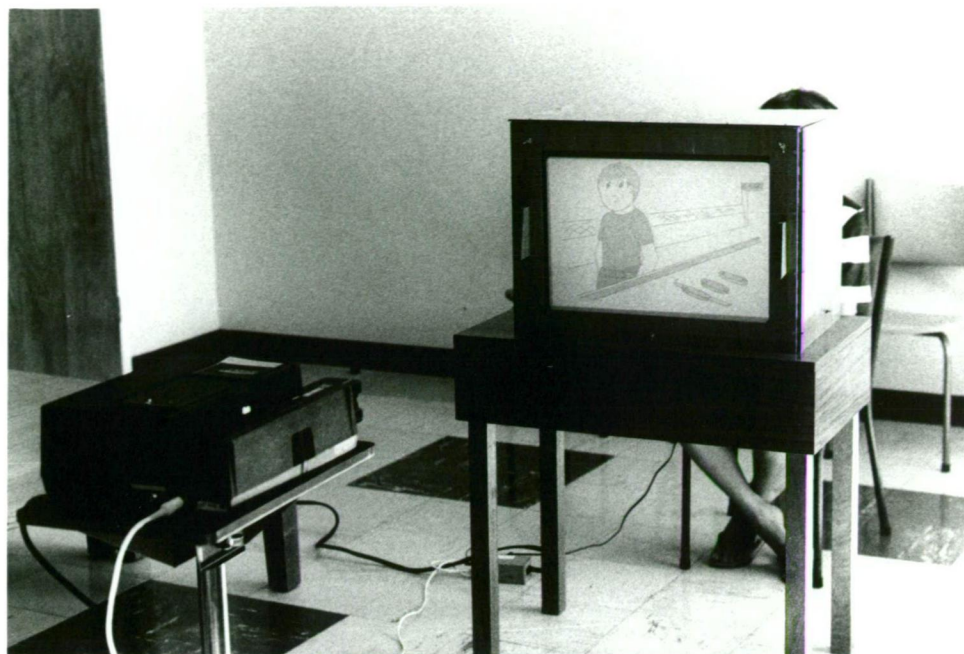


FIGURE 3a Slide Presentation of the Temptation to Steal Situations to the Child



FIGURE 3b Tester Orally Presenting the Temptation Situations and Recording the Child's Responses

A validity study (Haines and Jackson, 1979) using normal subjects confirmed that the responses given to the audio/slide presentation did not differ in any significant way from those given in the paper and pencil situation.

### Scoring

To assess reliability of scoring a random sub-sample of 10 percent of all protocols was rated by two trained raters.

Behavioural Responses: On the resistance or yielding behavioural response level there was an inter-rater reliability of  $r = 0.99$ .

Cognitive Process Responses: Jackson (1968) divided children's cognitive processes into two broad categories, namely intrinsic and extrinsic. Previously Jackson (1968) had classified what he referred to as the 'right/wrong' schema within the intrinsic category. However the probing of children's responses in a small pilot sample with the present methodology provided data to indicate that the right/wrong schema could arguably be given a separate position. For example, when one child was asked why it was 'wrong', he replied, "Because you could get into trouble". More often, however, other children responded to the probe 'why is it wrong' by saying, "Because it is wrong". Further questioning elicited a similar type of response.

The present research therefore has referred to three types of cognitive processes: intrinsic, extrinsic and right/wrong (Jackson, 1978c).

Using a 10 percent sample of children's responses an analysis of their cognitive processes by two trained raters indicated an inter-rater reliability of  $r = 0.81$ .

#### Jackson's Person and Parental Reaction Test (JPPRT):

The JPPRT is a paper and pencil test which examines what children feel and think when in temptation to steal situations. The test is divided into PERSON factors and PARENTAL factors. The child is provided with a story stem and a choice between two story endings. An example of a probe and story endings on the PERSON factors are as follows:

When I am tempted to steal	(a) find it easy to decide
something, I usually	right from wrong.
	(b) find it difficult to
	decide right from
	wrong.

An example of PARENTAL factor test items include:

If ever I get caught for	(a) explains then smacks.
pinching, my mother usually	(b) explains but does not
	smack.

There are 10 PERSON, and 12 PARENTAL factors on the JPPRT. The child can score 1 or 0 on each factor.

Jackson (1969) found that girls scored significantly higher on these types of variables compared to boys. Also girls obtained higher levels of resistance on the JHTST compared to boys. These data suggest a relationship between the JPPRT and the JHTST.

As many educable mentally retarded children could not read and write sufficiently to respond to the paper and pencil form of the JPPRT it was decided to represent pictorially the story endings, and to read these as well as the story stem to each child. The pictorial representations of the first example on the person and parental factors outlined above are presented in Figures 4(a,b) and 5(a,b) respectively.

During the test administration the tester told the child that information s/he provided would be strictly confidential. Testing did not proceed until the child said he felt comfortable about doing the test.

5. The Measure of 'General' Moral Judgement: Stephens has reported measures of moral judgement in a study relating to educable mentally retarded persons (Mahaney and Stephens, 1974). Earlier it was noted that the latest Kohlberg's Moral Judgement Scale was found to be unsuitable, however the measures used by Stephens were converted into a pictorial/verbal form and proved to be such that educable mentally retarded children could respond to them adequately. After extensive pilot sampling, two moral judgement measures were selected. For the purposes of distinguishing between these measures and Jackson's moral judgement ('should do') measures, the Stephens measures will hereafter be referred to as general moral judgement indices. The two general moral judgement measures chosen were:

- (a) Collective Responsibility Test
- (b) Clumsiness and Stealing Test.



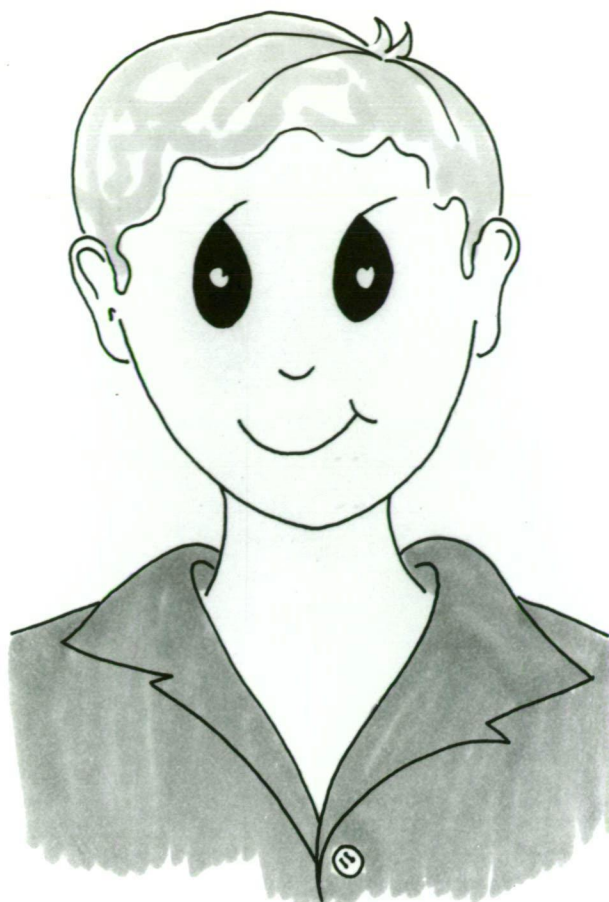


FIGURE 4a Representation of a Boy Finding it Easy to Decide 'Right' from 'Wrong'



FIGURE 4b Representation of a Boy Finding it Difficult to Decide 'Right' from 'Wrong'



FIGURE 5a      Representation of a Mother Who Explains  
Then Smacks



FIGURE 5b      Representation of a Mother Who Explains  
But Does Not Smack

(a) Collective Responsibility Test. Three stories were read to each child. A child was required to make a judgement concerning the justice of punishing an entire group for something one member had done. In some instances the identity of the wrongdoer was unknown. An example of one of the stories follows:

"Some boys were playing football near a school. One boy kicked a ball. He broke a window in a house. A man came out of the house. He asked who broke the window. No-one said anything. The other boys did not tell on him. The man went and got the school principal." (Story 3).

What should the principal do?

"Whom should he punish? No-one? Or the whole class? Why?"

To assist the child in comprehending the collective responsibility stories pictorial representations were provided. An illustration of the pictorial representation of the above example is given in Appendix I - C (Figure 42).

Scoring: Each test item or story was scored on a four point scale. The child's score consisted of his/her average points scored across stories.

(b) Clumsiness and Stealing Test. The aim of this measure was to establish if the child was more concerned about the intentions of the actor, or the material consequences of the action. The four stories were read in pairs. After each story the child was asked to repeat it before s/he was questioned on

it. An example of one of the stories was:

"1a. Mother said to John, "Come and eat lunch".

John went to eat his lunch. He went to pick up a glass of water. His arm banged into a tray of dishes. The dishes fell on the floor. Fifteen dishes broke.

1b. Mother said to Henry, "Do not eat any cookies".

As soon as mother left he ate some cookies. Henry dropped the cookie jar on the floor, and the cookie jar lid broke." (Story 1)

Which of the two boys did worse?

Why?"

Pictorial representations of clumsiness and stealing stories were also constructed to facilitate the children's understanding of the stories. An example of Story 1 is given in Appendix I - C (Figure 43 a,b).

Scoring: Each test item was scored on a three point scale. The child's score consisted of his/her average points scored across stories.

6. A Measure of Reflectivity: As Jackson's (1968) data indicated that resisters showed more evidence of 'self-discussion and reflection' operation in their processing of hypothetical temptation to steal situations than yielders, it was reasoned that there may be a positive relationship between children's resistance in hypothetical temptation to steal situations and

reflectivity. One acceptable way to measure reflectivity has been by Kagan's Matching Familiar Figures Test (KMFFT).

The children were administered the 'elementary' version of the KMFFT. Each child was shown both the stimulus item and the alternative array at the same time. The task was to match the stimulus item to the correct alternative. Latency of responses and accuracy was recorded for each child.

Scoring: Recently Salkind and Wright (1977) revealed methodological problems with the original scoring of the KMFFT and offered an alternative conceptualisation of the speed/accuracy domains of the test. They proposed two orthogonal constructs: impulsivity and efficiency. Impulsivity is defined as ranging from fast-inaccurate to slow-accurate performance, and efficiency from slow-inaccurate to fast-accurate performance. From this conceptualisation it was expected that reflection within Jackson's cognitive processing model would involve a slowing down of processing and therefore may be significantly related to the impulsivity construct, but not the efficiency construct. In analysing the impulsivity construct, large positive scores indicate impulsivity and large negative scores reveal reflectivity. In the efficiency domain large positive scores indicate inefficiency and large negative scores point to efficiency.

On the general moral judgement indices and Kagan's Matching Familiar Figures tests a 10 percent random sub-sample of children's responses demonstrated an inter-rater reliability ranging from 0.8 to 0.9.

7. Real Life Stealing Test: To provide some form of measure of educable mentally retarded children's behaviour in a real temptation to steal context, a real life stealing test was included in the study.

The stealing test was contrived along similar lines to Stephens self-control test (Moore and Stephens, 1974). Specifically the experimenter placed a dish of pre-counted candy in the room prior to the child's arrival. When the child came into the room the dish of candy was left on the desk. If the child referred to the candy the experimenter said that it belonged to another person who works in the room sometimes. After a period of working together the experimenter tells the child he has to leave the room for a couple of minutes. When he returns he dismisses the child. He then counts the candy to see if the child has taken any (Appendix I - E).

8. The Real Life Cheating Test: The cheating test was proposed in order to allow for a comparison between children's cheating and stealing behaviour. Because this study dealt with educable mentally retarded children the available cheating tests were examined for their suitability. This examination suggested certain test limitations. These were: (a) the inability of mentally retarded subjects to handle the self-recording requirements of Grinder's (1961) ray-gun game; and their inability to count in a classroom cheating test described by Moore and Stephens (1974); (b) although the difficulty level of another cheating test was within the range of educable mentally retarded

children it presented other problems. Grinder's (1961) bean bag game was complicated with electrical circuitry and the need for a one way screen. Such complexities presented practical limitations which ruled against the use of the bean bag game.

Because of the above limitations it was decided to construct a cheating test which educable mentally retarded children could easily operate and also offered few practical constraints.

General Criteria for Apparatus Construction: The criteria specified by Grinder, set out below, were generally accepted. Briefly, these criteria included: (a) a highly interesting and meaningful activity which made it easy to transgress and aroused no fear of coercion or detection; (b) a goal which was attainable by all subjects irrespective of skill differentials; (c) an objective recording system; (d) an apparatus easy to transport and operate in a familiar setting; and (e) an offer of the same incentive stimuli to all subjects.

The following specifications for the construction of a cheating test adhered to the above general criteria as closely as possible.

Characteristics of Apparatus: The following characteristics for apparatus were drawn up. The apparatus was to consist of a sloping wooden tray and six ball-bearings held separately. On the surface plane of the tray there were (see Figure 6a):

(a) two red dots placed at the beginning of the tray and placed either side of the centre of the tray;



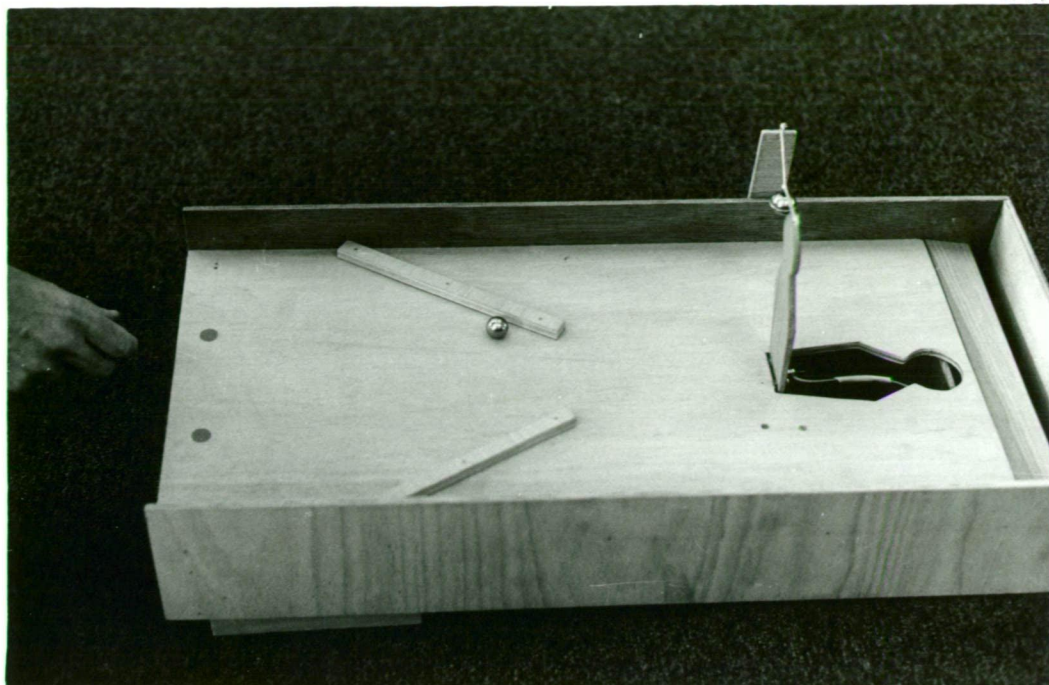


FIGURE 6a Child Rolling Ball at the 'Cut-Out' Man

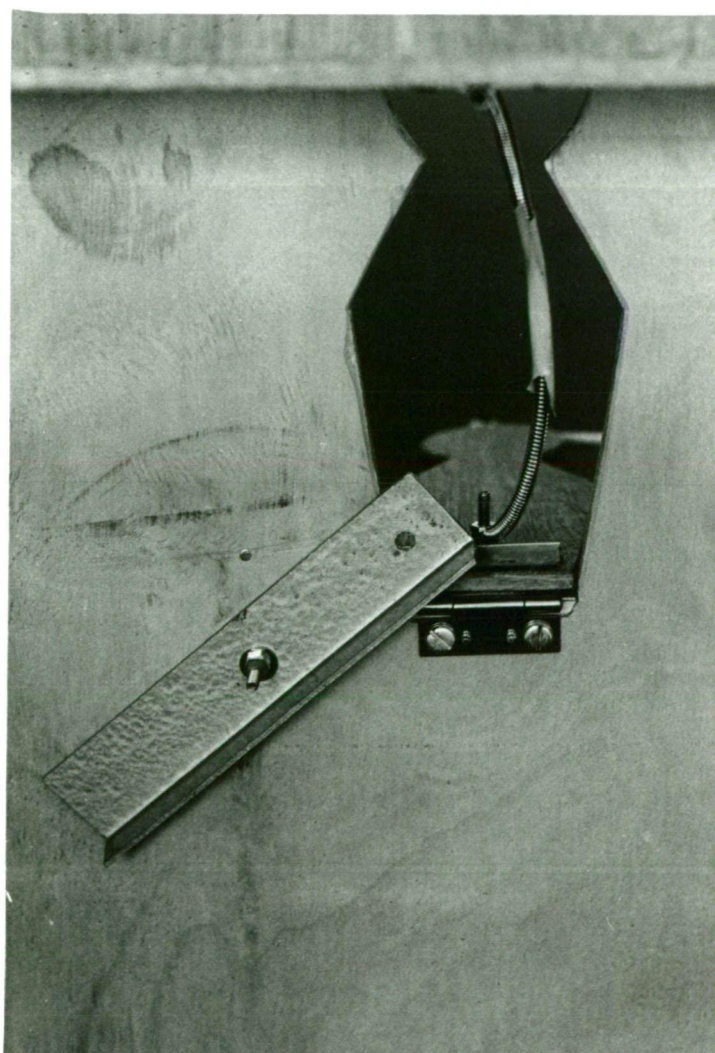


FIGURE 6b Locking Mechanism To Stop the Bell Ringing



(b) a further 12 cm down the tray from the red dots were two guiding pieces of wood (20 cm in length) one on either side of the tray, each pointing in toward the centre. There was a distance of 8 cm between the ends of the guiding rods;

(c) Fifteen centimetres past the edge of the guiding rods and centred between the edges of the tray was a cut out figure representing a person (15 cm in height). Attached to the head of the cut out figure was a wire which held a small bell and was connected to a strip of wood set above the edge of the tray at the same height as the cut out 'man';

On the reverse side of the wooden tray (See Figure 6b) was:

(d) a strong spring attached to the base of the cut out 'man';

(e) a sliding metal clip which was capable of locking in beneath the base of the cut out 'man' preventing the backward movement of the cut out; and

(f) when the clip was moved away from the base of the 'man' the cut out was able to move backwards upon impact and thereby ring the bell.

At the base of the tray was a recess which could hold balls rolled down the tray and prevent their convenient removal.

Method of Operating: The apparatus was introduced as a ball game the object being to hit the cut out 'man' hard enough to make the bell ring.

The experimenter demonstrated the rules of the 'ball game'.

He took three balls and indicated that the starting position for rolling the balls was between the two red dots. He said the player only had three rolls to try and make the bell ring. The guiding rods were referred to as aids to help the player aim straight at the 'man'.

The experimenter used his first roll to demonstrate that by simply letting the ball gently roll onto the 'man' the bell did not ring. He used the remaining two balls to show that if the 'man' was hit harder the bell would ring and a prize could be won.

The balls passing the 'man' or hitting the 'man' and rolling past it fell into the recess at the end of the tray. This was included so that the child could not roll more than three balls at the 'man'.

The incentive stimuli for the game was consistent for all children and consisted of a choice between five jelly beans or one plastic animal if the bell rang. The choice was given to increase the desirability of the prize across children.

After the demonstration, the experimenter pretended to check that the apparatus was working before the child was to have his turn. On this pretext he blocked the child's view of the 'man' and put the metal catch in the locking position so that the 'man' would not move and thus the bell would not ring if the 'man' was hit by the ball.

The experimenter then gave the child his three balls and indicated he had to go out for a minute but would come back shortly to ask if the child had hit the 'man' and rung the bell.

The experimenter then left the room and listened to the child roll his three balls. Immediately following this the experimenter returned so that the child would not have an opportunity to manually try and move the 'man'. The experimenter asked had the child rung the bell. If s/he said s/he did s/he was given his/her prize. However the bell could only ring if the child physically rattled the bell (Appendix I - F).

On both the cheating and stealing real life temptation measures the child either yielded or resisted. Scoring was carried out immediately after the child had been observed in the structured situation. From a 10 percent random sub-sample of children's responses an inter-rater reliability of 1.0 was revealed.

#### Testing Personnel and Procedure

Three trained experimenters, two female and one male, administered all measures in special testing rooms provided by the schools. Testing was conducted over a six week period. All children were tested individually. In order to avoid bias each of the three experimenters was randomly allocated approximately 27 children to test.

On the first day of testing both versions of the JHTST were administered. Prior to test items being first presented every child was given two trial examples to ensure s/he understood the task commands, and to allow for some time for rapport to be established. As mentioned the experimenter and subject were in separate rooms and all responses were tape recorded for later analysis.

On the next day of testing the general moral judgement measures were presented individually to the child. The experimenter sat beside the testee and explained the test stories, each of which was pictorially represented to facilitate their comprehensibility. Following these tests the child was administered the cheating test.

On the final day of testing the child was presented Kagan's Matching Familiar Figures test. The tester unobtrusively timed the child's responses with a stop-watch and immediately recorded the response latency and error number after each item. At the conclusion of this test the experimenter allowed the child to have a short break from testing. When the child came back to the testing room a bowl of smarties was positioned on the desk. Any questions by the child about the candy elicited the standard response that someone had come in whilst s/he was absent and left the candy there. In order to give the child a reason for staying in the room the experimenter asked the child to draw three pictures of his/her own choosing. After the first picture was drawn the tester made an excuse to leave the room for a couple of minutes. The child was left with the instruction to complete his drawings while the experimenter was absent. On his return the experimenter thanked the child for drawing the pictures and then dismissed him/her.

Each date of testing was separated by at least three days.

## CHAPTER 8

### RESULTS AND DISCUSSION

The data were analysed in two components

Part I Educable mentally retarded children's responses in hypothetical stealing dilemmas and real-life temptation situations.

Part II Educable mentally retarded children's cognitive processes in hypothetical temptation to steal situations.

These two components of the obtained data will be analysed and discussed separately. The raw scores for the data for each measure in Part I are presented in Appendix II - A to C.

#### 8.1 PART I : EDUCABLE MENTALLY RETARDED CHILDREN'S RESPONSES IN HYPOTHETICAL STEALING DILEMMAS AND REAL-LIFE TEMPTATION SITUATIONS

These data will be analysed in the following way:

1. A comparison of children's resistance responses on the behavioural and moral judgement measures of the JHTST.

2. A situation by situation analysis of the children's resistance responses on the behavioural and moral judgement measures of the JHTST.

3. A comparison of the children's resistance responses on the behavioural and moral judgement measures of the JHTST situation by situation.

4. An analysis of the relationship of the independent variables, age, sex, I.Q., SES, general moral judgement,

reflection - impulsivity/efficiency, and resistance on the moral judgement measure to the dependent variable - resistance on the behavioural measure, as well as the additive contribution the independent variables make to the variance of the dependent variable.

5. An analysis of the relationship of the independent variables - age, sex, I.Q., SES, general moral judgement, reflection - impulsivity/efficiency, and resistance on the behavioural measure to the dependent variable - resistance on the moral judgement measure, as well as the additive contribution the independent variables make to the variance of the dependent variable.

6. An analysis of the children's responses on the real-life temptation tests.

1. A Comparison of Children's Resistance Responses on the Behavioural ('did do') and Moral Judgement ('should do') Measures of the JHTST.

Consistent with the continuing interest of researchers in moral conduct and moral judgement, an analysis was performed on the children's resistance responses on the 'did do' and 'should do' measures. The results indicated that children obtained significantly higher mean resistance scores on the moral judgement as compared to the behavioural measure (means were 6.88 and 3.36 respectively, related  $t$  test = 11.09,  $df$  = 82,  $p < .001$ ). This finding suggested there was a significant discrepancy between what many children said they 'should do' compared to what they

'did do'. Hypothesis I was therefore confirmed.

2. A Situation by Situation Analysis of the Children's Resistance Responses on the Behavioural ('did do') and Moral Judgement ('should do') Measures of the JHTST.

In order to further analyse both types of resistance responses, and to determine whether the situations influenced the children's responses, a situation by situation analysis was performed. The situation analysis of the behavioural and moral judgement responses will be discussed separately.

Resistance Responses on the Behavioural Measure :  
situation by situation are shown in Table 1.

TABLE 1  
A Situation Breakdown of Children's Resistance Responses  
on the Behavioural Measure

Situation	Frequency of Subjects Resisting
1. Given too much change by shopkeeper	51
2. To board the bus without paying	33
3. Peer influence to take Lifesavers	29
4. Found purse	56
5. Pocket knife in Woolworths	27
6. Money in mother's draw	26
7. Help little brother to get pocket knife	28
8. Keep mother's change	29

An analysis of the responses in the various situation using the McNemar Test (1969) showed that children resisted significantly more in Situation 1 compared to Situations 2,3,5,6,7 and 8 ( $z = 3.28, 3.7, 3.9, 4.36, 3.89$  and  $3.57$  respectively;  $p < .01$  for all situations). A similar finding was derived when Situation 4 was compared to Situations 2,3,5,6,7 and 8 ( $z = 4.27, 5.1, 4.9, 5.3, 4.8$  and  $4.33$  respectively;  $p < .01$ ). There was no significant difference between Situation 1 and 4 ( $z = 1.09$ ;  $p > .05$ ), or Situation 2 to 3,5,6,7 and 8 ( $z = 0.1, 1.42, 1.46, 1.09$  and  $0.71$  respectively;  $p > .05$  for all situations); Situation 3 to 5,6,7 and 8 ( $z = 0.63, 0.78, 0.24$  and  $0$ ;  $p > .05$  for all situations); Situation 5 to 6,7 and 8 ( $z = 0.33, 0.3$  and  $0.5$  respectively;  $p > .05$  for all situations); Situation 6 to 7 and 8 ( $z = 1.27$  and  $0.9$  respectively;  $p > .05$  for all situations); and Situation 7 to 8 ( $z = 0.22$ ;  $p > .05$ ). These findings supported Hypothesis II.

Jackson (1968) found a similar high level of resistance in Situation 4 (found purse). He suggested that this was one temptation situation which teachers discussed with children even to the point of talking about the feelings of the one who had lost the money (Jackson, 1969).

Penner et al (1976) stressed that a child's feelings toward the owner was a critical influence in determining how he would respond. This emphasis on the child's perception of the owner as being disadvantaged if someone stole from him may go a long way toward explaining the present findings of a significant degree of resistance in the 'keeping too much change from a



shopkeeper' (Situation 1) and the 'keeping a found purse' (Situation 4) situations.

In contrast, it can be seen that in the big department store situations (Situations 5 and 7), and the bus situation (Situation 2) that it was harder for the children to identify with an owner. Also in the 'peer influence' situation (Situation 3) it appeared that peer pressure may have overcome the child's feelings for the owner. In comparing the small store situation (Situation 3) to the big department store situations (Situations 5 and 7) it can be seen there was slightly greater resistance in the small store situation, a finding in line with Smigel's (1970) research.

Several explanations have been offered for the high levels of stealing in the 'mother's drawer' situation (Situation 6) (Jackson, 1969). It was suggested that possibly the children had been successful in pilfering from parents in the past, or that children may perceive their parents as being less punitive than outside agents, and further that some children may have experienced faulty discrimination learning of intra-family 'yours/mine' distinctions. All of these explanations appear relevant to the present study.

The major implication from the situation by situation analysis of the data was that in Situations 1 and 4 where the owner was identifiable and a strategy of action had been taught, such as 'be fair to the owner', resistance to the temptation to steal was relatively high. It would appear therefore that

training which stressed empathetic considerations, along with a cognitive awareness and concern for the owner would be likely to reduce stealing behaviour.

Resistance Responses on the Moral Judgement Measure :  
situation by situation are shown in Table 2.

TABLE 2  
A Situation Breakdown of Children's Resistance Responses  
on the Moral Judgement Measure

Situation	Frequency of Subjects Resisting
1. Given too much change by shopkeeper	69
2. To board the bus without paying	71
3. Peer influence to take Lifesavers	73
4. Found purse	79
5. Pocket knife in Woolworths	71
6. Money in mother's draw	72
7. Help little brother to get pocket knife	68
8. Keep mother's change	68

Using the McNemar Test as a means of analysis it was shown that there was no significant difference between Situation 1 to 2,3,5,6,7 and 8 ( $z = 1.6, 0.89, 0.43, 0.66, 0.22$  and  $0.22$  respectively;  $p > .05$  for all situations); Situation 2 to 3,5,6,7 and 8 ( $z = 0.63, 0, 0.26, 0.78$  and  $0.69$  respectively;  $p > .05$  for all situations); Situation 3 to 4,5,6,7 and 8 ( $z = 1.73, 0.38,$

0.33, 1.89 and 1.51 respectively;  $p > .05$  for all situations); Situation 4 to 6 ( $z = 1.81$ ;  $p > .05$ ). While the children resisted significantly more in Situation 4 compared to 1, 2, 5, 7 and 8 ( $z = 2.67, 2.0, 3.1$  and  $2.52$  respectively;  $p < .05$  for all situations). These findings fail to confirm Hypothesis III.

The most striking aspect of these findings was the overall high number of children resisting in each situation. These results suggest that most children had comprehended the social rule which prohibits stealing. The higher number of children resisting in Situation 4 relative to most of the other situations reflects the trend of almost complete resistance in Situation 4.

### 3. A Comparison of the Children's Resistance Responses on the Behavioural ('did do') and Moral Judgement ('should do') Measures Situation by Situation on the JHTST.

To further analyse the difference between behaviour and moral judgement, a situation by situation comparison of the children's responses was made. This comparison is graphically represented in Figure 7.

When comparing the children's responses on each situation on the behavioural ('did do') measure to their responses on the corresponding situation on the moral judgement ('should do') measure, it was clear that the children resisted significantly more on each situation on the 'should do' measure (by the McNemar test,  $z = 3.18, 5.6, 6.22, 4.64, 6.14, 6.38, 5.9$  and  $5.82$  respectively for the eight situation comparisons;  $p < .01$  for all

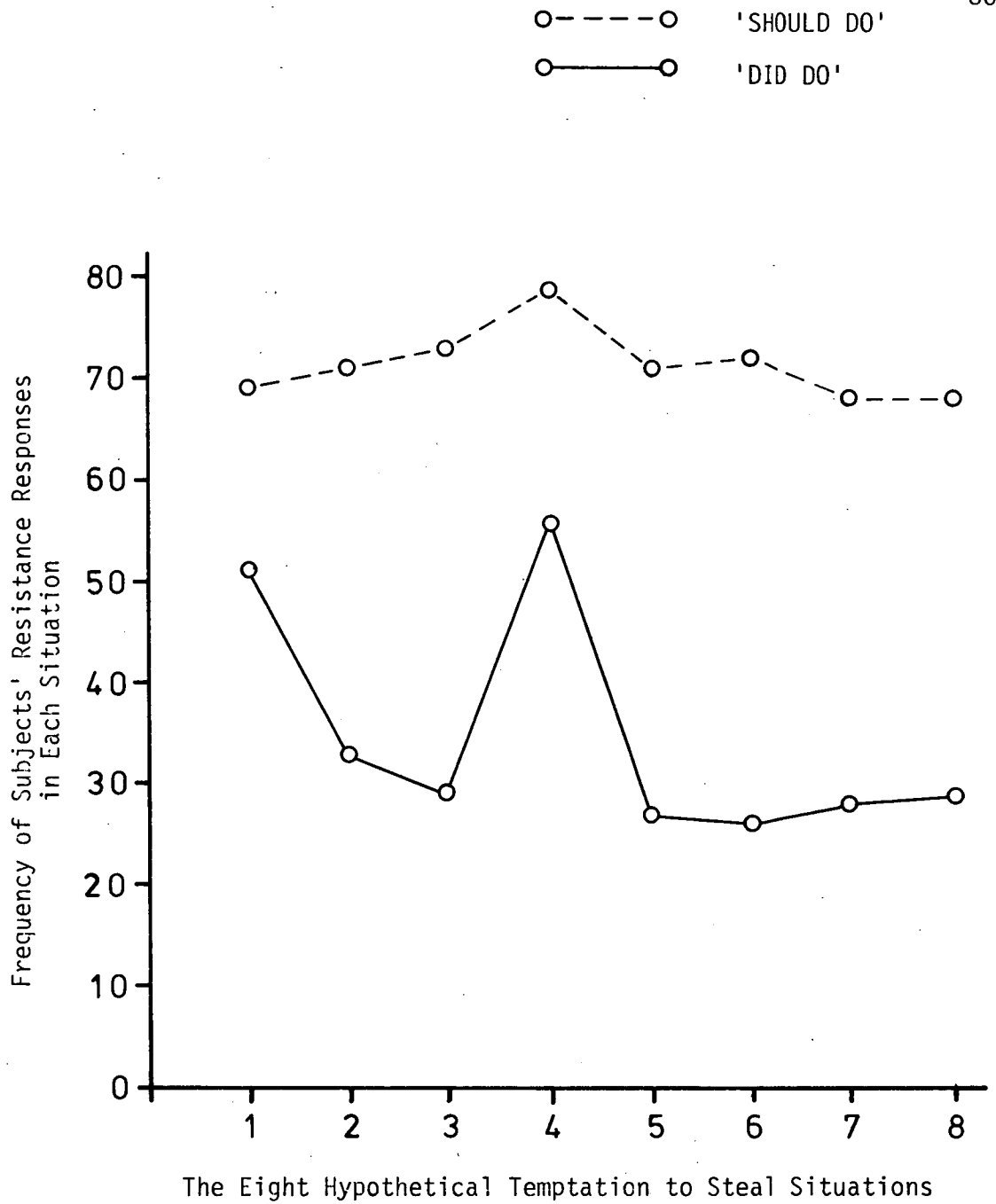


FIGURE 7 Frequency of Subjects' Resistance Responses in Each Situation on the 'Should Do' and 'Did Do' Measures

situations). This result supported Hypothesis IV.

However, inspection of the data indicated that 9 (10.8%) of the 83 children resisted across all hypothetical temptation situations both behaviourally and in their moral judgement responses. Such individuals were termed by Haines, Jackson and Davidson (1980) as categorical resisters. This finding, which supports Hypothesis V, suggested that a small number of children could resist consistently across situations and is similar to Hartshorne and May's (1928) finding. In this sample of educable mentally retarded children all of the categorical resisters were males, from across the I.Q., age, and socio-economic range of the sample. A further group of 13 children (16%) were identified as categorical yielders on the behavioural measure of the JHTST. There was approximately equal representation of males (7) and females (6) in this group, although in terms of percentages these figures indicate that 11 percent of males were categorical yielders compared to 27 percent of females.

As the cognitive processes that categorical resisters employ are of particular significance in this study they will be examined in the section on cognitive operations.

Another feature of the data was the children's legitimate alternative responses. That is, after indicating resistance the child would elaborate on a way of getting his/her goal by socially acceptable or legitimate means. Nine children (6 males; 3 females) used at least one legitimate acquisition response on

the behavioural measure across the eight situations on the JHTST. Jackson's data (1968) also suggested that only a few children spontaneously chose to use legitimate means to achieve their goal.

When it came to the children's legitimate alternative scores on the moral judgement measure some 28 (33.7%) children used one or more legitimate alternative scores across the eight situations on the JHTST. A comparison of the children's legitimate alternative scores on the 'did do' and 'should do' measures indicated that the children used significantly higher mean legitimate alternative scores on the 'should do' measure (means were 0.18, 0.51 respectively; related  $t$  test = 3.095;  $df = 82$ ;  $p < .01$ ). Hypothesis VI was therefore confirmed.

It is suggested that this finding may be explained by the argument that when the children are making an evaluative judgement response they have fewer competing demands on their cognitive functioning by emotive factors compared to when they must make an actual behavioural response in a situation. This view holds that children have more cognitive power on the 'should do' measure to apply to generating legitimate alternative responses than they do on the 'did do' measure. This explanation is consistent with the earlier finding of a significant relationship between I.Q and the 'should do' measure, but not with the 'did do' measure.

4. An Analysis of the Relationships of the Independent Variables (IVs): Age, Sex, I.Q., SES, General Moral Judgement, Reflection - Impulsivity/Efficiency, Parent and Person Variables, and Resistance on the Moral Judgement Measure to the Dependent Variable (DV), Resistance on the Behaviour Measures, as Well as the Additive Contribution the IVs make to the Variance of the DV.

J.B. Wilson's (1978) "Teddybear" Statistical Package was used for the correlations and multiple regression analysis, except where reference was made to specific tests. The results indicated that there were no significant correlations between the independent variables, age, I.Q., general moral judgement, impulsivity/efficiency, SES and the person and parent variables as measured by the JPPRT, and the dependent variable, behavioural resistance. For these variables Hypothesis VII was not supported.

There was a significant relationship between the independent variable, sex, and the dependent variable ( $r_{pbis} = 0.26$ ;  $p < .05$ ). Further analysis of the sex variable indicated that males resisted significantly more than females ( $t = 2.30$ ;  $p < .01$ ;  $df = 81$ ). Also there was a significant correlation between resistance on the moral judgement and behaviour measures ( $r = 0.23$ ;  $p < .02$ ). For these two variables Hypothesis VII was supported.

The non significant findings suggested that within the age and I.Q. range of the sample, educable mentally retarded children's age, intelligence, general moral judgement level, impulsivity/efficiency, SES and the person and parent variables

on the JPPRT were not good predictors of the children's resistance on the 'did do' measure in the hypothetical temptation to steal situations.

These data on age and I.Q. question the developmental nature of moral conduct (Moore and Stephens, 1974) and the relationship between cognitive competency and honesty (Hartshorne and May, 1928). However, it must be recalled that the I.Q. (50-75) and age (11-16) ranges within the present study are restricted. The general moral judgement data indicate that this type of thinking may bear little correspondence to the specific problem of stealing. It was expected that because Jackson (1968) found that resisters showed clearer evidence of self-discussion and reflection in their cognitive processing of a temptation to steal problem than yielders, that there may have been a significant relationship between reflectivity and resistance on the JHTST. This expectation was not realised. The lack of a significant relationship between the person and parental variables on the JPPRT and resistance on the JHTST was also not anticipated. This result may have been due to a methodological artefact. In Jackson's study (1968) the children responded to a paper and pencil version of the JPPRT. However, because of the inapplicability of this version of the test with the retarded, the experimenter sat with the child during the test administration to explain the test items. This procedure may have caused the children to make socially acquiescent responses.



Although the findings relating two of the independent variables, sex, and resistance on the moral judgement measure, to the dependent variable, resistance on the behavioural measure were statistically significant, they each accounted for only approximately 10 percent of the variance of the DV. This qualification must be considered when referring to these IVs as predictive variables of resistance in hypothetical temptation to steal situations. The finding of greater resistance by educable mentally retarded males compared to females is contrary to findings with normal children (Jackson, 1968; Wright, 1971). However, it must be stressed that no previous findings have been based on a sample of educable mentally retarded children. A replication study with educable mentally retarded children is therefore suggested.

The results of a multiple regression analysis showed that additively all of the IVs accounted for only 18 percent of the DV. As the IVs account for a relatively small proportion of the variance of the DV, it is possible that a substantial part of the remaining variance may be accounted for by an interaction between a complex set of person and situation variables.

5. An Analysis of the Relationships of the Independent Variables (as set out above) and Resistance on the Behavioural Measure to the Dependent Variable, Resistance on the Moral Judgement Measure as well as the Additive Contribution the Independent Variables Make to the Variance of the Dependent Variable

The findings indicated that there was no significant relationship between the IVs, age, sex, SES, parental variables,

or impulsivity, and the moral judgement measure relating to clumsiness and stealing, to the dependent variable, resistance on the moral judgement measure. These results did not support Hypothesis VIII and suggested that high level resistance scores were not confined to a particular age or SES level, but were found across the age and socio-economic range within the sample. Also there was not a strong correlation between the parental variables on the JPPRT, and what educable mentally retarded children think they 'should do' in a set of hypothetical temptation to steal situations.

Information on either the duration of the interval that educable mentally retarded children reflect on a match to sample type problem, or whether they focus on the intentions of the actor, as compared to the consequences of the action, both failed to operate as good predictors of resistance on the moral judgement measure. These findings were consistent with those on the 'did do' measure. The finding of no significant relationship between sex and resistance in the 'should do' measure, however, was counter to the results on the 'did do' measure.

Taken together the results on the relationship between the sex and the 'did do' and 'should do' measures indicated that there was no significant difference between what boys and girls felt they 'should do' in hypothetical temptation to steal situations. When it came to what they 'did do' however, the boys resisted significantly more than the girls. That is, the correspondence between what the children said they 'should do' and 'did do' was higher for the boys than for the girls.

Small, but statistically significant correlations were found between resistance on the moral judgement measure and the IVs ( $r = 0.31$ ;  $p < .005$ ), efficiency ( $r = 0.21$ ;  $p < .05$ ), person variables on the JPPRT ( $r = 0.26$ ;  $p < .01$ ), and the collective responsibility of general moral judgement ( $r = 0.31$ ;  $p < .005$ ). These results supported Hypothesis VIII and suggested that I.Q. was one predictive variable of resistance on the moral judgement measure. Also the children's accuracy or cognitive efficiency on match to sample problems, as well as their allocation of blame to the responsible party in a moral conflict, were both significantly correlated to resistance on the moral judgement measure. Person variables, such as "finding it easy to distinguish 'right' and 'wrong'", were also related to what children thought they 'should do'. Overall the above findings reflect the role that cognitive competency plays in resistance on the moral judgement measure. These results are also consistent with the relationship other researchers have found between cognitive functioning and moral judgement (Kohlberg, 1976a; Mischel and Mischel, 1976).

The results of a multiple regression analysis of the independent variables on the dependent variable showed that additively the IVs account for 26 percent of the variation of the DV resistance on the 'should do' measure. This result shows that the IVs account for more of the variance on the 'should do' measure (26%) compared to the 'did do' measure (18%).

The fact that these independent variables accounted for less than a third of the variance of resistance on the behavioural or moral judgement measures suggests that another complex set of variables may account for a large proportion of the variance of resistance on the 'did do' and 'should do' measures of the JHTST.

#### Analysis of the Real-life Temptation Situations.

The real-life temptation situations included a stealing and cheating test. The results of these two tests have been analysed and discussed separately.

The Stealing Test. From the sample of 83 educable mentally retarded children 16 (19%) stole one or more smarties (lollies) from the bowl when the experimenter was absent from the room. Of these 16 children, 12 were males and 4 females. Proportionately this represented approximately the same degree of stealing among males and females. A point biserial correlation test, however, found no significant relationship between stealing and sex ( $r_{pbis} = 0$ ;  $p > .05$ ). In order to examine the developmental nature of stealing an analysis between age and stealing was performed. This analysis revealed a significant relationship between age and stealing ( $r = 0.21$ ;  $p < .05$ ). This finding is consistent with Moore and Stephens' (1974) developmental research conclusions.

An analysis of the children's resistance scores on the 'did do' measure compared to their real-life stealing behaviour indicated there was no significant relationship between the two

variables. Hypothesis IX was thus not confirmed. The discrepancy between the 'did do' measure and the real-life stealing test may arise from the limitations of the real-life measure.

Further analysis of the real-life temptation situation indicated that 5 of the stealers were categorical yielders (3 males, 2 females), and only one (male) was a categorical resister on the behavioural measure of the JHTST. The difference between categorical yielders and resisters in the real-life stealing situation was assessed using Fishers Exact test. There was no statistical significant difference ( $p > .05$ ). However, 38.5 percent of the categorical yielders stole candy as compared to only 11 percent of the categorical resisters. In previous research Haines, Jackson and Davidson (1980) found that all six categorical resisters on the JHTST resisted in a real-life temptation to steal situation. A number of considerations must be taken into account in comparing these two research findings.

Firstly, in the earlier study the real-life temptation situation was designed to be very similar in terms of the context and temptation stimuli to that used in one of the hypothetical situations in the JHTST. In contrast, in the current study there was no obvious similarity between the context, or temptation stimuli in the real-life situation as compared to any of the hypothetical situations in the JHTST.

Secondly, the earlier study involved normal children. This may account for some differences, and at least suggests the need for replications with both groups of children.

Thirdly, the difference between the results of the two studies is really quite arbitrary. The difference is represented by only 1 out of 9 educable mentally retarded categorical resisters stealing candy as compared to none of the 6 normal categorical resisters 'keeping found money'.

On balance therefore the categorical resister label generated from the JHTST could be regarded as having a degree of predictive validity, at least in terms of real-life situations which are similar to those hypothetical situations used in the JHTST.

#### The Cheating Test

Forty (48%) educable mentally retarded children cheated on the 'ball game'. Of these there were 31 (50%) males and 9 (41%) females. Analysis of the correlations between the independent variables, sex, age, SES, I.Q., general moral judgement, parent and person variables scores, resistance scores on the behavioural and moral judgement measures to the dependent variable, cheating, indicated that there was no significant relationship between the IVs and the DV.

As hypothetical temptation to steal behaviour and cheating represent clearly different types of responding it was not unexpected that there was not a significant relationship between the two measures. This result supported Hypothesis X.

A significant relationship between cheating: I.Q., age, and sex may have been expected from other research findings. However, it must be recalled that the age and I.Q. of the sample

were somewhat restricted (age range, 11 to 16 years, I.Q. 50 to 75).

Further analysis of the cheating test indicated that 5 cheaters were categorical yielders (3 males, 2 females), and 4 were categorical resisters on the JHTST. Also a comparison of the children's responses on the real-life temptations revealed that significantly more children cheated as compared to those who stole (McNemar test,  $p < .05$ ) and also there was no significant relationship between stealing and cheating. These findings supported Hypothesis XI and the research literature which suggests there is not a significant relationship between children's responses in the moral behaviour domains (Lickona, 1976).

A direct comparison between the real-life cheating and stealing tests must be qualified by the fact that in the cheating test the children had the opportunity of two kinds of temptation stimuli, candy and plastic toys, while in the stealing test candy was the only temptation stimulus.

### Conclusion

The major finding of this part of the study was that there was a significant discrepancy between the children's resistance on the moral judgement ('should do') measure compared to the behavioural ('did do') measure in each situation and across the eight temptation to steal dilemmas as measured by the JHTST.

It was concluded from these results that most of the children had acquired some form of the social rule prohibiting

stealing, but had not acted consistently in accord with that rule. This conclusion had to be qualified however by the finding that a small number of the children, termed categorical resisters, resisted in all situations. The suggestion was made that the finding of categorical resistance provided important data for the specificity/generality debate.

A situation by situation analysis of the children's behavioural responses indicated that a significantly greater proportion of the sample resisted in Situations 1 and 4 ('too much change from shopkeeper', and 'found purse') when compared to the remaining six situations. This difference between Situations 1 and 4 and the remaining situations on the JHTST was discussed in relation to Jackson (1969) and Penner et al's (1976) notion that the child's consideration for the owner played an important role in the child's decision to resist or yield to the temptation to steal.

An examination of the children's moral judgement response to each hypothetical situation indicated high levels of resistance in every situation with almost ubiquitous resistance in Situation 4.

Additional analysis revealed that the independent variables, age, I.Q., SES, general moral judgement, person and parent variables and reflection, were not significantly related to the dependent variable, behavioural resistance, whereas the independent variables, sex and moral judgement resistance, were significantly related to the dependent variable and were



regarded as the best predictors of behavioural resistance. Interestingly it was found that males resisted significantly more than females. This result differs from other findings in the literature with normal children. It was also found that the independent variables accounted for only 18 percent of the variance of the dependent variable, resistance on the behavioural measure.

When it came to the independent variables related to the dependent variable, moral judgement resistance, it was found that the independent variables, age, sex, SES, parental variables, impulsivity/efficiency and the clumsiness and stealing measure, were not significantly related to the dependent variable, while the independent variables, I.Q., person variables and collective responsibility, were significantly related to the dependent variable, moral judgement resistance. It was further found that the independent variables accounted for only 26 percent of the variance of the dependent variable.

The children's responses to the real-life temptation situations revealed a significant relationship between age and stealing, but not between age and cheating. The children cheated significantly more than they stole, while there was no significant relationship between cheating and stealing in the real-life temptation situations. These results emphasise the situational specificity of responding within moral domains.

## 8.2 PART II : EDUCABLE MENTALLY RETARDED CHILDREN'S COGNITIVE PROCESSES IN HYPOTHETICAL TEMPTATION TO STEAL SITUATIONS

The present study has followed Jackson's conceptualization of the nature of stealing as consisting of a temptation phase, involving cognitive activity, and outcome phase which indicates the child's decision to resist or yield. As these two phases are functionally related it would seem critical to examine the kinds of cognitive processes educable mentally retarded children use to influence their decision to resist or yield.

An examination of the cognitive processes will be based on an analysis of the data across situations and within situations. The raw data and means for the following measures will be reported in Appendix II - D to G.

### 1. An Across Situations Analysis

The 'reasons' for a yielding response were divided into either 'intrinsic' or 'extrinsic' cognitive process categories, while the 'reasons' for a resisting response could involve 'intrinsic' 'extrinsic' or 'right/wrong' cognitive process categories. The data for the yielding and resistance cognitive process categories were obtained by counting the type of cognitive processes a child used to resist or yield in each situation, and then averaging these scores using the eight situations when an analysis of means was required. This analysis will involve a separate discussion of the children's resistance and yielding cognitive processes.

(i) Yielding Cognitive Processes. A situational presentation of the children's yielding cognitive processes on both the 'did do' and 'should do' measures is shown in Table 3.

TABLE 3

Frequency of Yielding Responses on the 'Did Do' and 'Should Do' Measures by the 83 Children Classified by Type of Cognitive Process

			SITUATIONS							
			1	2	3	4	5	6	7	8
FREQUENCY OF SUB- JECTS' YIELDING RES- PONSES CLASSIFIED BY TYPE OF COGNI- TIVE PROCESS	'Did Do' Measure	Extrinsic	30	50	54	27	55	57	11	54
		Intrinsic	2	0	0	0	1	0	44	0
	'Should Do' Measure	Extrinsic	8	12	9	4	12	11	6	15
		Intrinsic	6	0	0	0	0	0	9	0

From the above table it is clear that across situations children used more 'extrinsic', compared to 'intrinsic' schemata or cognitive processes on both the 'did do' and 'should do' measures. In order to test this observation and to examine the interaction between the measures and the cognitive processes a 2 x 2 ANOVA analysis of variance was performed with repeated measures over subjects (Appendix II - H). The analysis revealed significant main effects and a significant interaction :

'Did' vs 'Should' ,  $F(1,82) = 108.64 \quad p < .001$

'Extrinsic' vs 'Intrinsic'  $F(1,82) = 215.92 \quad p < .001$

Interaction  $F(1,82) = 78.02 \quad p < .001$

Accordingly Duncan's New Multiple Range Tests (1955) were performed to examine differences between means. The means of the cognitive processes are shown in Figure 8. The mean for extrinsic processes was significantly greater than the mean for intrinsic processes in

○ — — — — ○ 'DID DO' 102.  
○ — — — — ○ 'SHOULD DO'

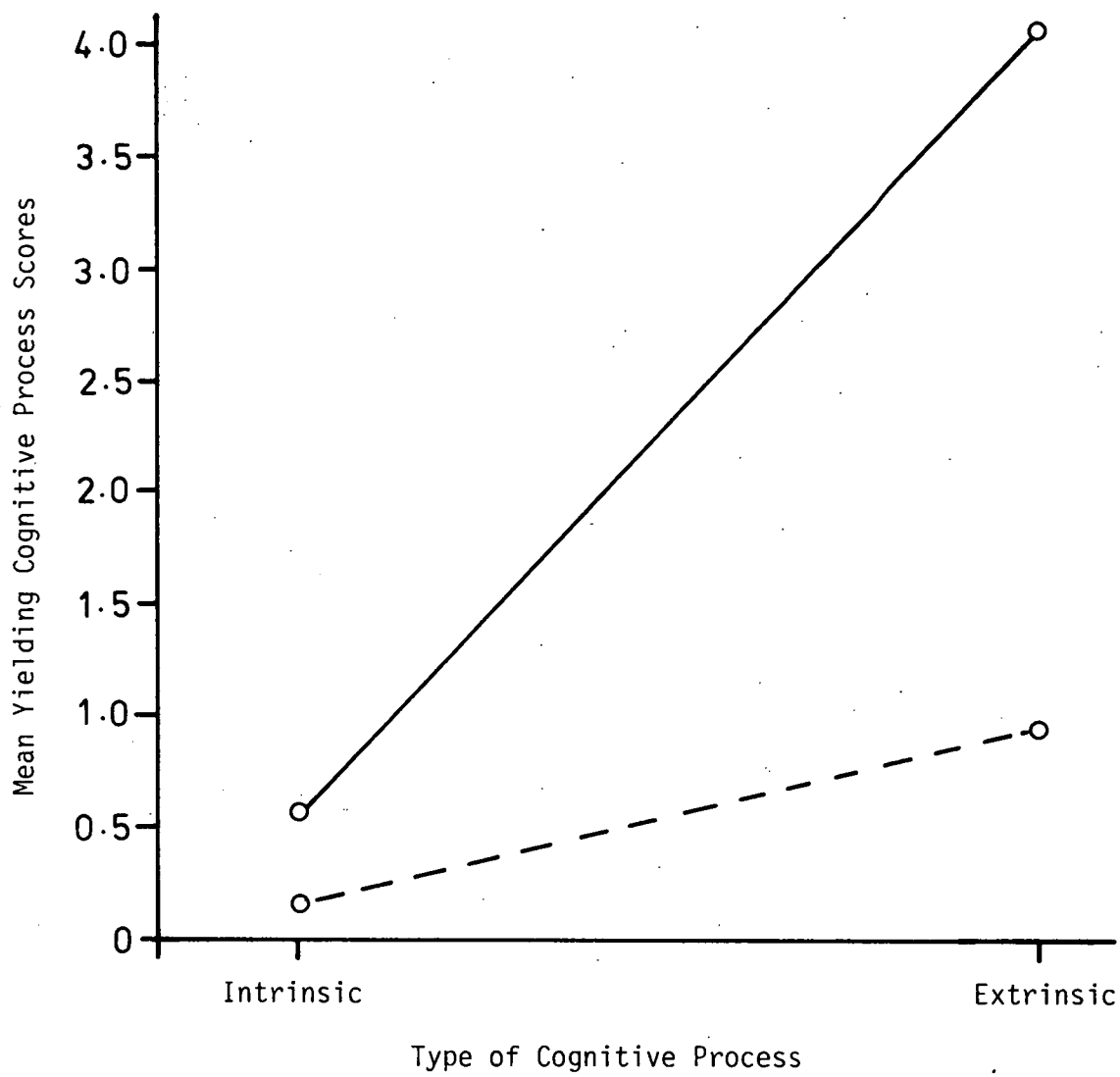


FIGURE 8 Mean Yielding Cognitive Process Scores on the 'Did Do' and 'Should Do' Measures

both the behavioural ('did do') and moral judgement ('should do') measures ( $t = 16.1$ ,  $p < .0001$ ;  $t = 3.6$ ,  $p < .001$ ).

With the extrinsic processes the behavioural measure had a significantly higher mean than the moral judgement measure ( $t = 14.37$ ,  $p < .0001$ ), however with the intrinsic processes the trend was in the same direction but did not achieve statistical significance ( $t = 1.88$ ,  $p > .05$ ). The interaction shows that the difference between the 'did' and 'should' measures for the extrinsic processes was significantly greater than the corresponding difference for intrinsic processes.

Overall the results demonstrate that children use predominantly extrinsic motives to yield whether it can be on the behavioural or moral judgement measure and also that they use more extrinsic processes on the 'did' compared to 'should' measures. These findings supported Hypotheses I and III.

(ii) Resistance Cognitive Processes. A situational presentation of the children's cognitive processes on the 'did' and 'should' measures is shown in Table 4.

In order to compare the data shown in the above table a 2 (did/should)  $\times$  3 (right/wrong, extrinsic, intrinsic) analysis of variance was performed with repeated measures over subjects (Appendix II - I). The analysis revealed significant main effects and a significant interaction :

'Did' vs 'Should'	$F(1,82) = 106.66$ $p < .001$
Intrinsic vs Extrinsic vs Right/Wrong	$F(2,146) = 26.92$ $p < .001$
Interaction	$F(2,164) = 3.55$ $p < .05$

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\* It should be noted that the F value just fails to exceed the very conservative Greenhouse and Geisser (Winer, 1971) criterion of  $F'_{82} = 3.96$ ,  $p < .05$ . Since it did however exceed the Greenhouse and Geisser criterion  $F'_{82} = 2.77$ ,  $p = .10$  level, it seems reasonable to interpret the effect as meaningful.

TABLE 4

Frequency of Resistance Responses on the 'Did Do' and 'Should Do' Measures by the 83 Children Classified by Type of Cognitive Process

			SITUATIONS							
			1	2	3	4	5	6	7	8
FREQUENCY OF SUBJECTS' RESISTANCE RESPONSES CLASSIFIED BY TYPE OF COGNITIVE PROCESS	'Did Do' Measure	Right/ Wrong	44	15	19	23	17	11	20	6
		Extrinsic	4	17	10	7	9	9	4	19
		Intrinsic	3	1	0	26	1	6	4	4
	'Should Do' Measure	Right/ Wrong	49	36	33	25	32	22	32	24
		Extrinsic	16	32	35	13	31	34	25	33
		Intrinsic	4	3	5	41	8	16	11	11

Therefore Duncan's New Multiple Range Tests were performed to examine the differences between means. The means of the cognitive process are shown in Figure 9. On the 'did do' measure the mean for right/wrong processes was significantly greater than the extrinsic or intrinsic processes ( $p < .05$ ). While there was no significant difference between the extrinsic and intrinsic processes ( $p > .05$ ). On the 'should do' measure both the right/wrong and extrinsic processes were significantly greater than the intrinsic processes ( $p < .05$ ). These results failed to support Hypothesis II.

Although not specifically hypothesised it was of research interest to compare the processes or schemata between the measures. By means of the t test statistic it was found that the mean scores on each of the cognitive schema on the 'should do' measure were significantly greater than those on the 'did do' measure

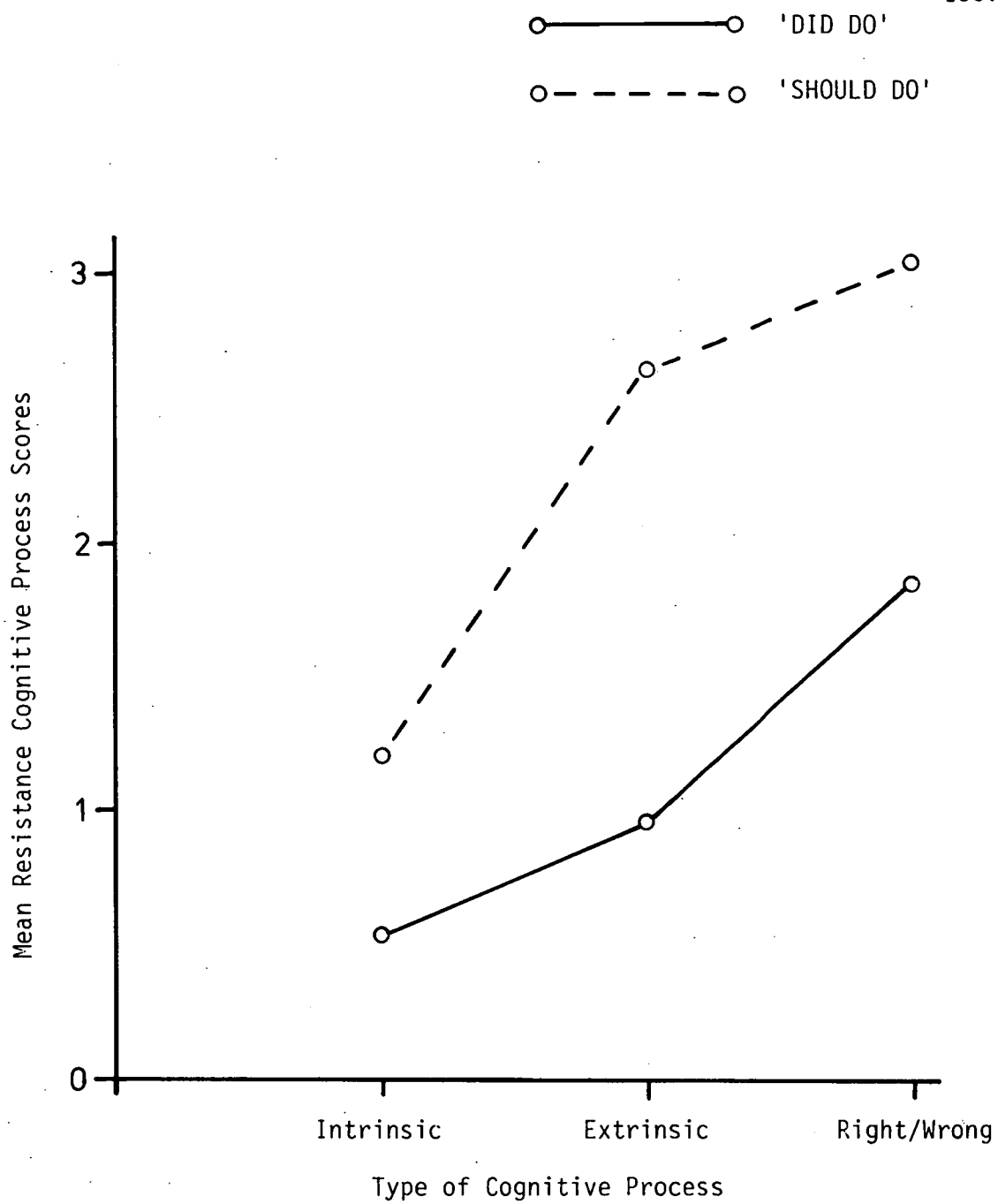


FIGURE 9 Mean Resistance Cognitive Process Scores on the 'Did Do' and 'Should Do' Measures

(right/wrong,  $t = 4.39$ ,  $p < .0001$ ; extrinsic,  $t = 6.2$ ,  $p < .0001$ ; intrinsic,  $t = 2.44$ ,  $p < .01$ ). This result indicated a significant mean increase from 'did do' to 'should do' in each cognitive processing category. Hypothesis IV was therefore supported.

As mentioned another finding from the  $2 \times 3$  ANOVA was a significant interaction between the 'did do' and 'should do' measures and the cognitive processes ( $F_{2,164} = 3.55$ ,  $p < .05$ ). To investigate this interaction an orthogonal partitioning procedure was adopted (Appendix II - I). The differences between the behavioural ('did do') and moral judgement ('should do') measures were compared. The difference was significantly greater for extrinsic processes than for intrinsic processes ( $F_{1,164} = 7.09$ ,  $p < .01$ ). The difference for the right/wrong category was intermediate and not significantly different from the difference for either extrinsic or intrinsic processes ( $F_{1,164} = 1.65$ ;  $F_{1,164} = 1.9$ ,  $p > .05$  respectively).

In summary, the findings on the resistance cognitive processes within and between the 'did do' and 'should do' measures were as follows :

(1) On the 'did do' measure the children used the right/wrong category significantly more than the extrinsic or intrinsic categories. There was no significant difference between the extrinsic and intrinsic processes. On the 'should do' measure the children used the intrinsic category significantly less than the right/wrong or extrinsic schemata. However, there



was no difference between the right/wrong and extrinsic processes.

(2) There was a significant mean increase from the 'did do' to the 'should do' measure on each cognitive category, and

(3) The mean increase from 'did do' to 'should do' on the extrinsic category was significantly greater than in the intrinsic category. The right/wrong category was not significantly different from the difference for either extrinsic or intrinsic processes.

## 2. A Within Situation Analysis

It was expected that within situations the children would tend to use one type of cognitive process more than another to motivate their yielding or resistance responses. To test this expectation on both the 'did do' and 'should do' measures, cognitive processes were compared in pairs to a theoretical chance distribution using a binomial statistic as a means of analysis.

An examination of the children's cognitive processes will involve a separate analysis of the (a) behavioural measure, and (b) moral judgement measure.

(a) The Behavioural Measure. An analysis of the resistance and yielding cognitive processes will be discussed separately.

(i) Yielding Cognitive Processes. A graphic representation of the yielding cognitive processes, situation by situation, follows (see Figure 10).

An analysis of the children's extrinsic compared to intrinsic yielding processes situation by situation shows that on situations 1, 2, 3, 4, 5, 6 and 8 the children used significantly more extrinsic 'reasons' for yielding ( $p < .001$  for all situations). In contrast, in Situation 7 the children used significantly more intrinsic 'reasons' for yielding ( $p < .05$ ).

In a qualitative analysis of his data, Jackson (1968) also identified that most children used extrinsic 'reasons' or motives for yielding. However, in the one situation Jackson designed to arouse empathy (the little brother situation) he found that most children revealed a concern for others even though they made a yielding response. The data in this study also showed a similar trend to that of Jackson's, and indicated that most of the educable mentally retarded children in the little brother situation (Situation 7) used predominantly intrinsic 'reasons' for stealing. The following is an example of one of the children's responses:

I "took it and give to him cause he had lost the  
one mum give him for his birthday"

(Child C.C.; Story 7)

The findings from these cognitive operations clearly demonstrate that the nature of the situation has a strong influence on the type of cognitive orientation the child uses when he yields. The results supported Hypotheses V(a)(b).

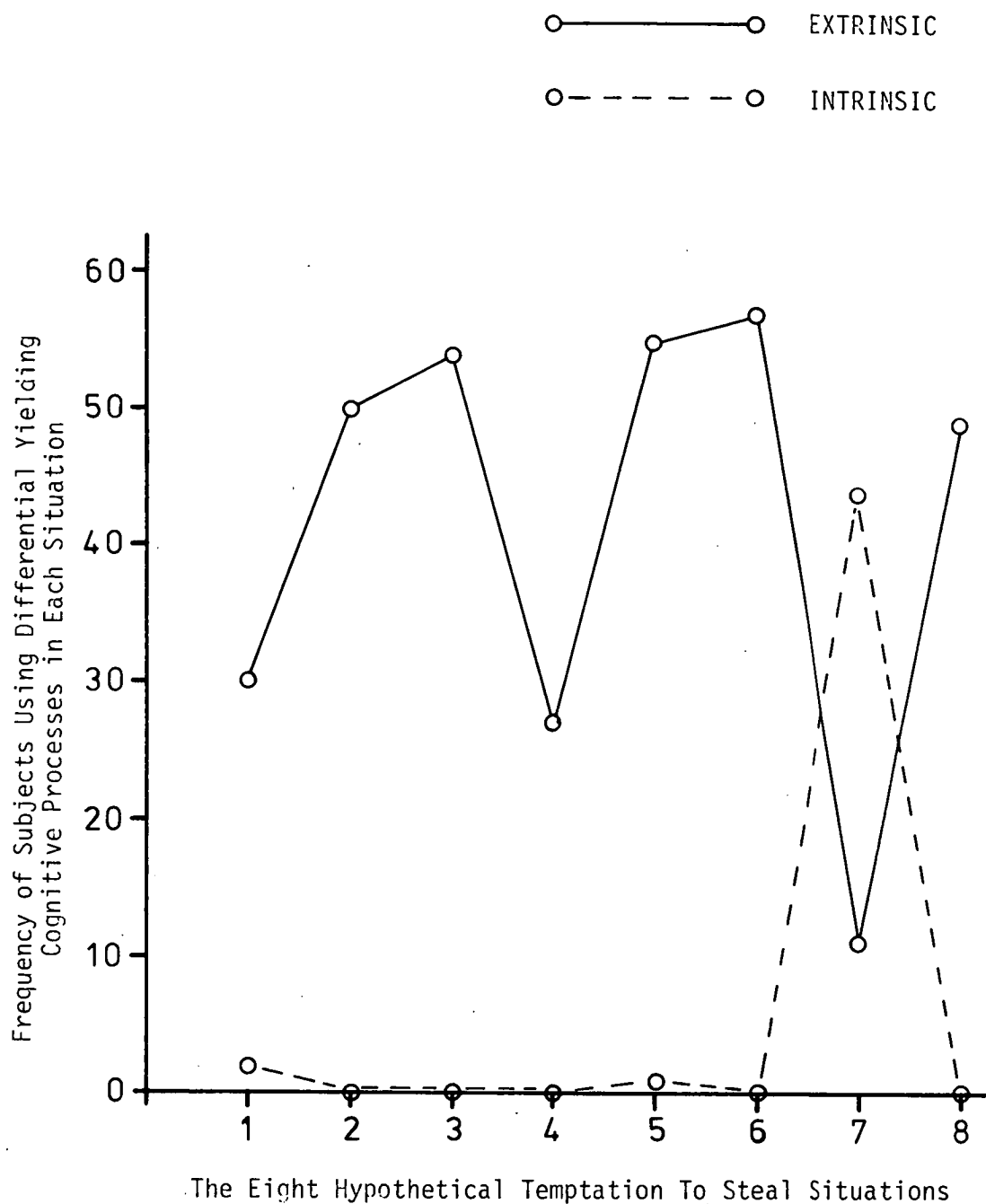


FIGURE 10 Frequency of Subjects' Using Differential Yielding Cognitive Processes in Each Situation on the 'Did Do' Measure

(ii) Resistance Cognitive Processes. A profile of the three kinds of resistance processes the educable mentally retarded children used in each situation on the JHTST is depicted in Figure 11.

An analysis of Situation 1 demonstrated that the right/wrong reference was used significantly more than either the extrinsic or intrinsic motives for resistance ( $p < .001$  for each comparison). A similar result was found in Situation 7 ( $p < .01$  for each comparison). Also there was no significant difference between the number of extrinsic and intrinsic cognitive operations used in either Situation 1 or 7 ( $p > .05$  for both situations). There was no significant difference between the number of right/wrong and extrinsic motives for resistance in Situation 2, 3 and 5 ( $p > .05$  for all situations). However, the children used significantly more right/wrong and extrinsic frames of reference compared to intrinsic motives in Situation 2 and 3 ( $p < .001$  for each comparison within the situations) and 5 ( $p < .001$  on the right/wrong comparison to intrinsic, and  $p < .02$  on the extrinsic to intrinsic).

An analysis of Situation 4 indicated that there was no significant difference between the number of right/wrong and intrinsic frames of reference ( $p < .05$ ) while both the right/wrong and extrinsic were used significantly greater than intrinsic processes ( $p < .01$  for both comparisons).

In Situation 6 there was no significant difference between right/wrong and extrinsic and intrinsic processes ( $p > .05$  for each comparison).

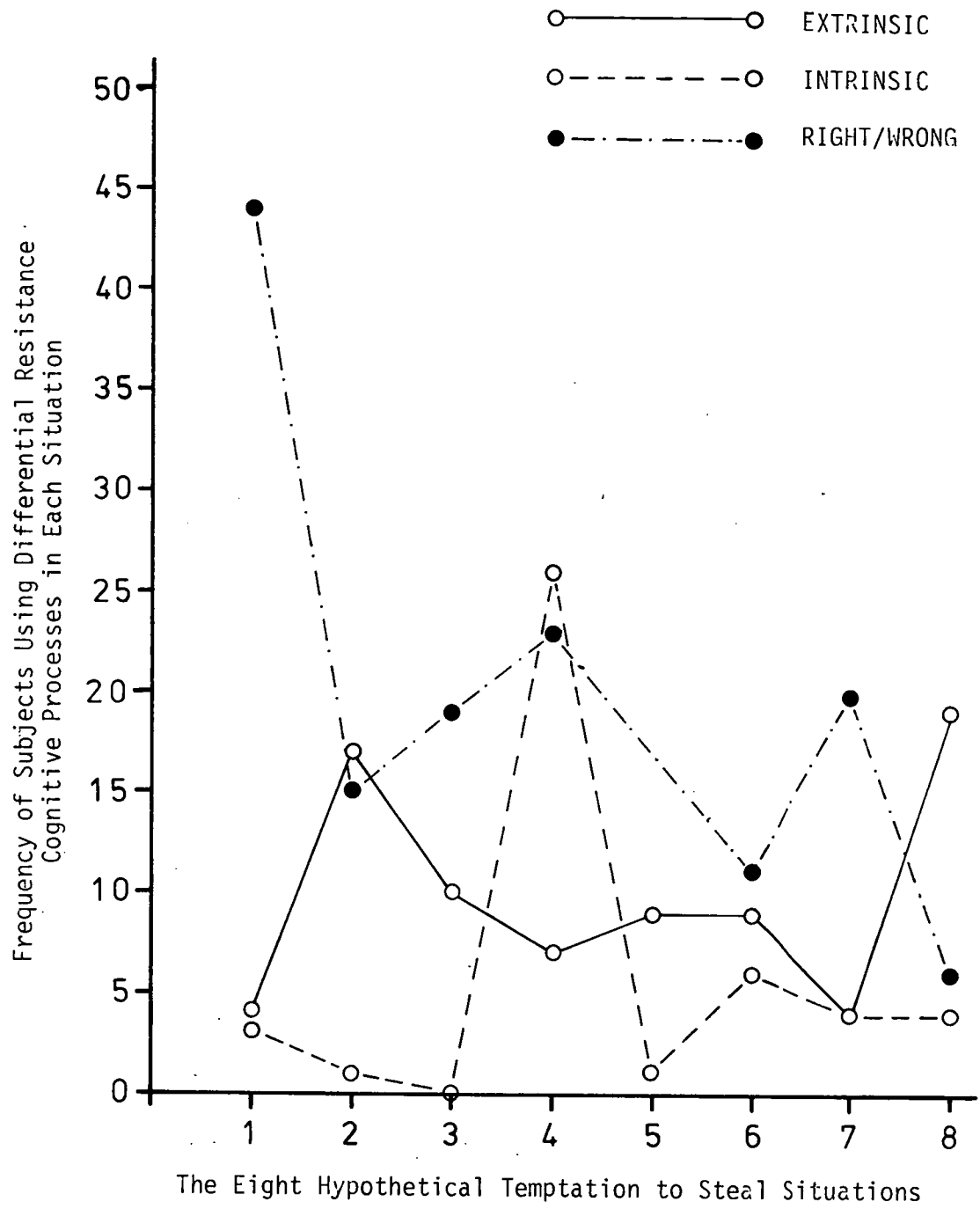


FIGURE 11      Frequency of Subjects Using Differential Resistance Cognitive Processes in Each Situation on the 'Did Do' Measure

An examination of Situation 8 revealed that the children used significantly more extrinsic compared to intrinsic processes ( $p < .01$ ) while there was no significant difference between extrinsic and right/wrong ( $p > .05$ ), right/wrong and intrinsic ( $p > .05$ ).

Inspection of Situation 1 revealed that the term 'too much' is presented twice. Some children could conceivably resist and then simply recall the 'too much' term to explain why they resisted. A re-designing of Situation 1 may be necessary. An empirical comparison between the original Situation 1 and the redesigned version may help to tease out the effect that the wording in the original Situation 1 has on the children's resistance cognitive processing.

In Situation 7 (little brother), like Situation 1, significantly more children used a right/wrong frame of reference compared to extrinsic or intrinsic frames of reference. A reason for the low extrinsic processing may be found in the argument that the fear of consequences is not a major consideration for the child as s/he has no personal need to steal the knife. Low intrinsic processing may have resulted because the child was more concerned about his/her brother than the owner. Accordingly children may have used the impersonal and general notion that stealing is wrong, rather than trying to attach a clearer or more fundamental reason as to why it is wrong.

In Situations 2 (bus situation), 3 (Life-savers situation), 5 (Coles store situation), most children used basically either an extrinsic or right/wrong schema to resist. These three types of

situations would seem to be regularly occurring situations in most children's experience. In all probability most children would have either personally or vicariously experienced the consequences of being caught in these kinds of situations. The substantial degree of resistance relating to extrinsic considerations is therefore not unexpected. As suggested, the right/wrong schema responses may be accounted for by the inability to express a clear orientation, or by unsophisticated notions of resistance, or by the children's use of summary statements referring to a 'wrongness' of stealing concept.

The small number of intrinsic responses may be explained by the difficulty in those situations of identifying an owner for whom to show consideration.

Again in Situation 4 a substantial proportion of the sample used the right/wrong schema. However, an even higher proportion of children used an intrinsic schema to resist. A typical example of an intrinsic frame of reference was :

"I'd give it to the owner because it's their money  
they lost it"

(Child J.D., Story 4)

This type of consideration of the owner response becomes more understandable when it is recognised that the situation is highly personalised with an identifiable owner. The child can readily empathise with the owner's plight.

Situation 8 represents a situation of high detectability. Consistent with this interpretation, an analysis of the children's

cognitive processes revealed that the majority used an extrinsic frame of reference in resisting the temptation to steal. An example of a child's extrinsically motivated response follows :

"Don't worry about the drink ... in case mother finds out, she might come shopping one day and say 30¢ and go really mad and smack"

(Child J.C., Story 8)

The above typical example reflects the child's concern that his mother may detect his misdemeanor on a future shopping trip. In this type of situation the child could never be sure when his mother would find out. The time delay between the child's yielding and possible discovery may be lengthy. The thought of this type of aversive consequence may be sufficient to generate enough anticipatory anxiety to motivate the child to use a fear of consequences schema in resisting the urge to steal.

A separate situation by situation analysis of categorical resisters' cognitive operations presented a similar profile of resistance strategies as that represented by the overall sample (see Figure 12).

In summary, the above situational analysis of educable mentally retarded children's cognitive processes in hypothetical temptation to steal situations as assessed by the 'did do' measure on the JHTST indicated the kinds of influences the situation per se, has on responding. This finding is generally consistent with other research conclusions in the resistance to temptation literature (Hartshorne and May, 1928; Jackson, 1968; Mischel and Mischel, 1976).



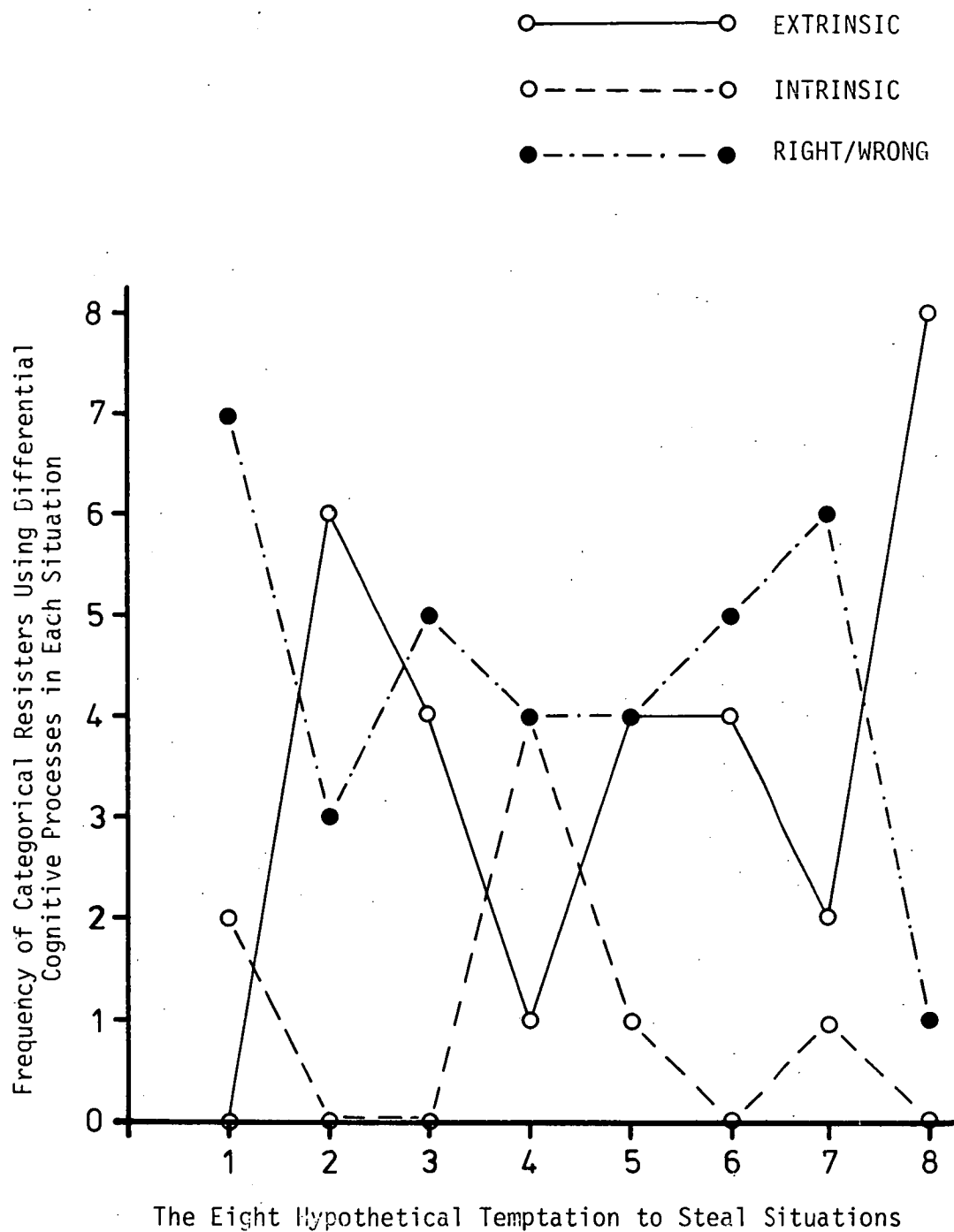


FIGURE 12

Frequency of Categorical Resisters Using Differential Cognitive Processes on the 'Did Do' Measure

However, these other research reports, with the exception of Jackson (1968), had not focused on the children's cognitive processes, but rather on their end responses.

Given the very high number of children using right/wrong strategies in Situation 1, it would appear that factors in addition to an understanding, but inability to express a clear resistance orientation, or a child's unsophisticated level of resistance, or his/her use of a selective no stealing summary statement are operating in Situation 1. These factors include situation specific considerations and possible methodological artefacts.

In relation to the situation specific considerations, the child may have learned to regard buying 'cakes' from a shopkeeper in transactional terms. That is, the child sees the item as having a fixed price which s/he must pay to complete the transaction. If, as in Situation 1, the shopkeeper makes a mistake and gives too much change, the child may feel it is right in terms of the correctness of the transaction to point out the error, even though s/he is tempted to keep the extra change. In this interpretation the child may imply it would be wrong to take the extra change because it would not be an equitable transaction. In this sense the right/wrong frame of reference refers to the transaction per se, and is distinguishable from extrinsic and intrinsic frames of reference.

Also some children's reference to the typical 'too much' change statement as an explanation of why they resisted may, in part, be due to a methodological artefact. In order to discuss this point, Situation 1 will be presented :

"One day your mother gave you 40 cents and sent you down to the shop to buy some cakes. The cakes cost 35 cents but when the shopkeeper gave you the change he handed you 10 cents which was of course 5 cents too much. (OK?) You looked at the change and knew there was too much."

(Situation 1).

Overall, the above analyses suggest that the nature of the situations not only influences the type of response, but also the kinds of cognitive operations the children use to resist. In Situation 1 where the shopkeeper gives the child 'too much change' a typical 'reason' for resistance given by children was, "I did not take it because it was too much".

Experimenter probing of this type of response often led to a circular chain of interchanges between the child and the experimenter, with the child often ending up by saying he did not take the 'too much change' because it was 'too much'. This type of response was coded as a right/wrong frame of reference. The child may not have been able to express a clear extrinsic or intrinsic 'reason', or may simply have been operating at an unsophisticated or early developmental level where he could recognise stealing as 'wrong', but could not really define why it was 'wrong'. This may be a type of habit response. This kind of response may be found in very young children who are told by their mother, for instance, not to take lollies from the shop because "it is wrong". If the mother either did not tell the child why stealing is wrong, or if she did, but the child could not understand the explanation, it is likely

when the child confronts a similar situation that s/he would say s/he would resist simply because stealing is 'wrong'. Further questioning may not budge him/her from this response. This is really a type of conditioned response and has been regarded by Aronfreed (1976) as representing a cognitive label with an attached anxiety loading.

Alternatively, some children may have used a summary statement, such as, "it's stealing" or "it's naughty" as sufficient reason to explain why they resisted. These children therefore may have been able to supply a clear orientation response but felt that this kind of summary statement was what they actually used to motivate their resistance response.

(b) The Moral Judgement Measure. An analysis of the resistance and yielding processes will be discussed separately.

(i) Yielding Cognitive Processes. A graphic representation of the yielding cognitive processes situation by situation follows. (see Figure 13).

An analysis of the children's extrinsic compared to intrinsic yielding processes situation by situation revealed that on Situations 2, 3, 5, 6 and 8 the children used significantly more extrinsic 'reasons' for yielding ( $p < .01$  for all situations), while in Situation 1, 4 and 7 there was no significant difference in cognitive processes ( $p > .05$  for all situations). This finding lent some support to Hypothesis V(a)(b).

In most of the situations therefore significantly more of those children who judged that they should yield used extrinsic

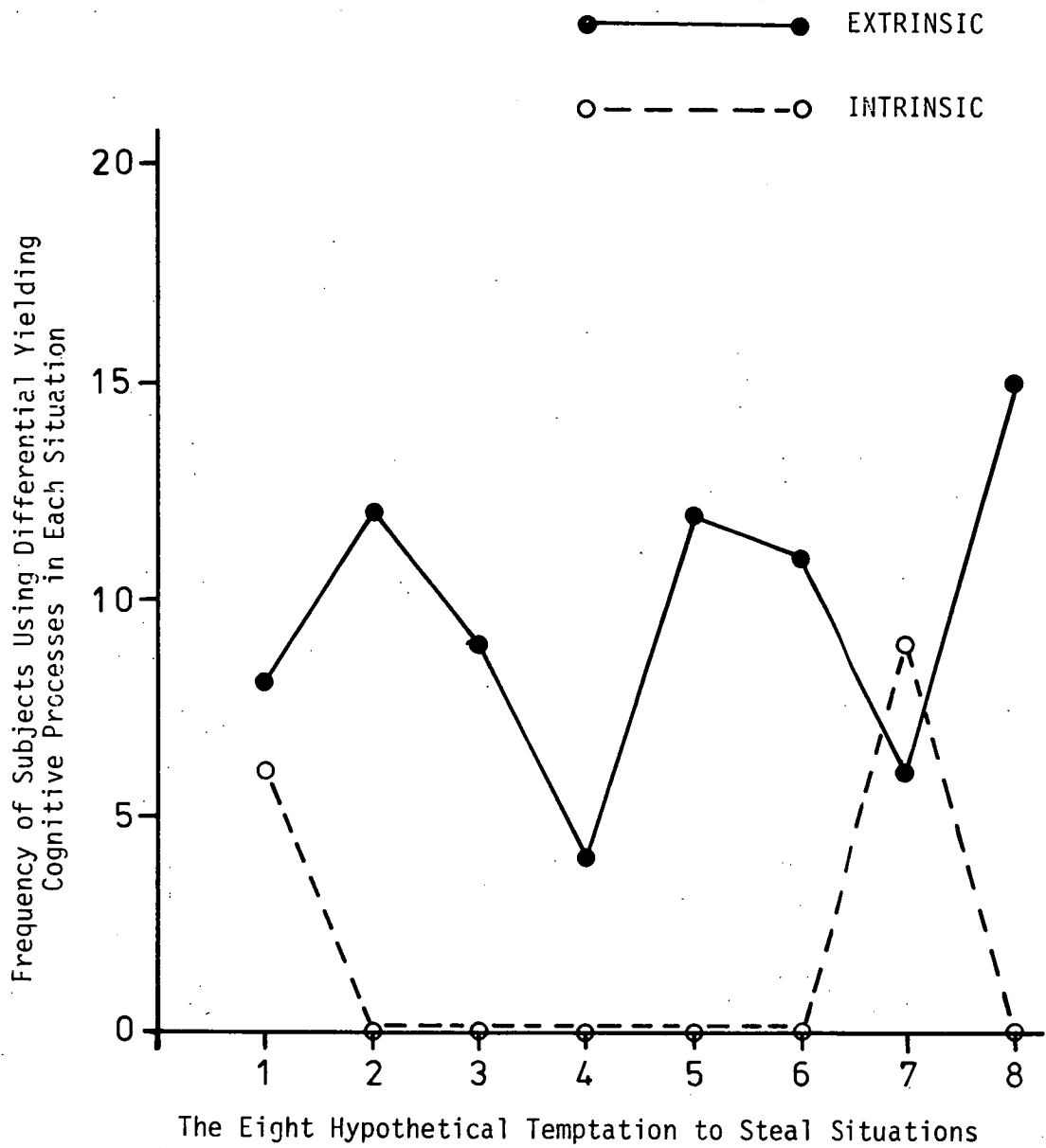


FIGURE 13 Frequency of Subjects Using Differential Yielding Cognitive Processes in Each Situation on the 'Should Do' Measure

'reasons' to motivate their judgement. This finding is similar to that found from the data on the children's yielding cognitive processes on the behavioural measure. Although the difference between extrinsic and intrinsic cognitive processes was not significantly different from what would have been expected by chance in Situations 1, 4 and 7, the trend in each of these situations approximates the results found on the corresponding situations on the behavioural measure. Overall, therefore, a similar conclusion from the data on the children's yielding cognitive processes on both the 'did do' and 'should do' measures emerges. Namely, that although in most situations the child will focus on extrinsic concerns to motivate his/her yielding behaviour and moral judgement, situations can be contrived to reverse this trend.

(ii) Resistance Cognitive Processes. A profile of the three kinds of resistance processes the educable mentally retarded children used in each situation is presented in Figure 14.

An analysis of the schemata in Situation 1 indicated that most children who resisted said they should not keep the excess change because it was 'wrong'. Significantly more children used the right/wrong strategy processes compared to those using an extrinsic or intrinsic 'reason' to resist ( $p < .001$  for each comparison). These data showed that relatively few children used moral judgement processing which was oriented toward a concern for the shopkeeper, or fear of consequences, although extrinsic processes were used significantly more than intrinsic ( $p < .05$ ).

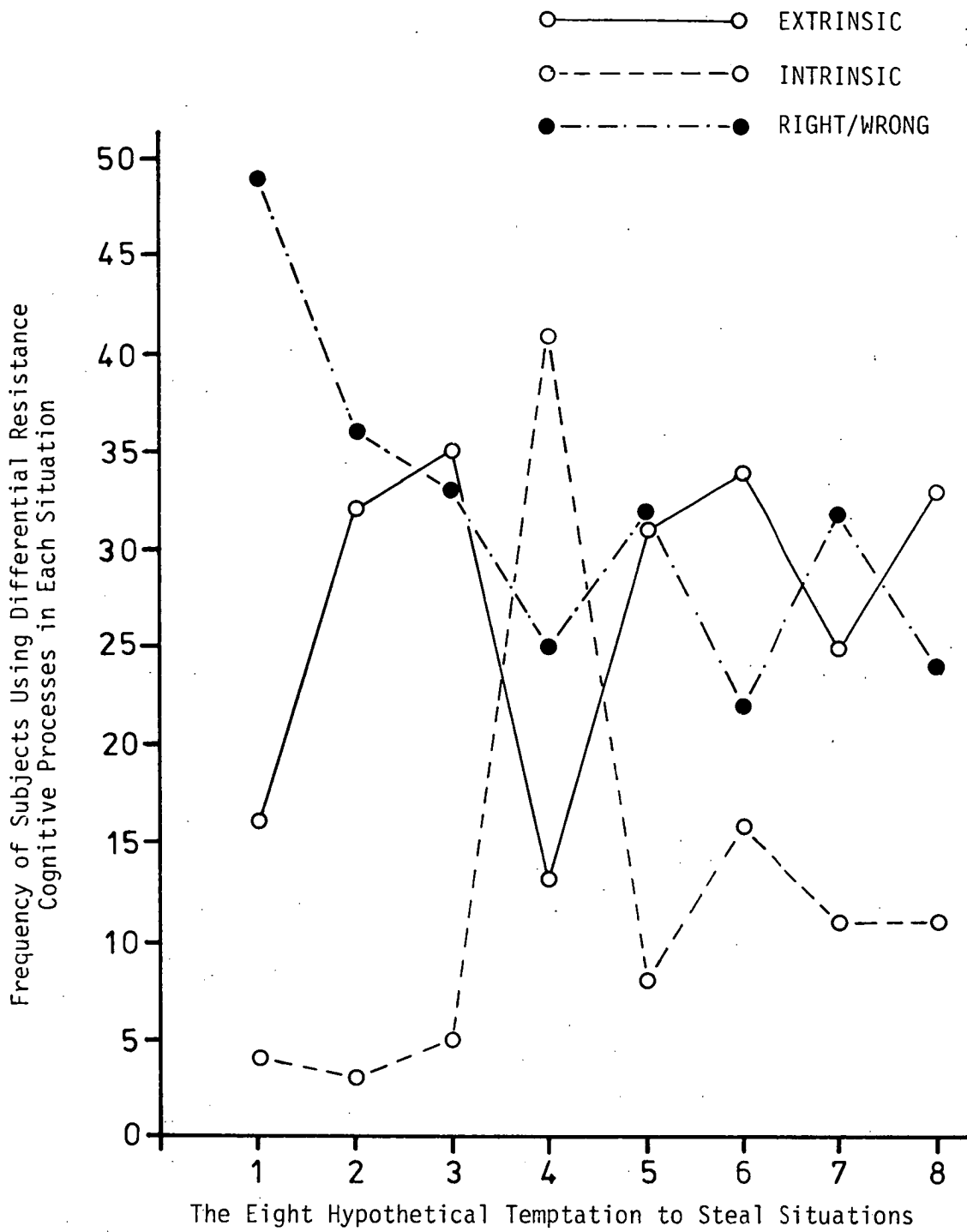


FIGURE 14 Frequency of Subjects Using Differential Resistance Cognitive Processes in Each Situation on the 'Should Do' Measure

In Situations 2, 3, 5, 6, 7 and 8 there was no significant difference between the number of children using right/wrong compared to extrinsic motives for resisting ( $p > .05$  for all situations).

The children used significantly more right/wrong compared to intrinsic processes in Situation 2, 3, 5 and 7 ( $p < .01$  for all situations).

In Situation 8 there was no significant difference between right/wrong and extrinsic processing scores ( $p > .05$ ).

The extrinsic processes were used significantly more than intrinsic processes in Situation 2, 3, 4, 7 and 8 ( $p < .05$  for all situations).

However, in Situation 4 the trend was reversed with significantly more children using intrinsically oriented responses compared to either right/wrong or extrinsic 'reasoning' ( $p < .05$ ). This result reflects that most children think they 'should' resist because the owner will be disadvantaged in some important way if his/her purse is stolen. This kind of processing is shown in the following examples :

"Take it and find the owner to it cause it's not yours"

(Child C.C., Story 4)

"Find out and see who it is then the people wont' know

Ring the police up it might be someones purse, they  
might find out its lost"

(Child K.B., Story 4).

Children also used the right/wrong processing significantly more than extrinsic processes in Situation 4 ( $p < .05$ ).



In Situation 6 children used significantly more extrinsic compared to intrinsic processing than would be expected by chance ( $p < .01$ ) while there was no significant variation from a chance distribution when right/wrong processing was compared to either extrinsic or intrinsic processing ( $p > .05$ ).

An overall observation of the type of cognitive processes educable mentally retarded children used in this study indicates that the processes were not different in kind from those reported for normal children by Haines, Jackson and Davidson (1980).

### Discussion

The major findings from the yielding cognitive processing data on both the behavioural and moral judgement measures was the significantly greater use of extrinsic compared to intrinsic schema. However, from the within situation analysis it was shown that in Situation 7, which was designed to evoke the subject's sympathy for his/her little brother, that more intrinsic responses were recorded. This trend was the reverse of that found of other situations. Jackson (1968) found a similar profile of cognitive processing in each situation as was revealed with this sample of educable mentally retarded children.

The major finding on both the 'did' and 'should' measures from the resistance cognitive process data was the preponderance of right/wrong responses made by the sample - a result which was counter to expectations. As the mental age of the sample ranged from only five and a half to twelve years, it was reasoned from the developmental literature (Mischel and Mischel, 1976; Piaget,

1977), that most of the educable mentally retarded children's responses would focus on the consequences of the hypothetical temptation to steal situation, and therefore be extrinsic in nature. The presence of a large proportion of right/wrong responses across situations generally suggested three possible explanations. Firstly, that the children using right/wrong responses were not capable of expressing a clear orientation. If this was the case children who used a right/wrong 'reason' on one situation would not be able to express an extrinsic or intrinsic schema on any of the other situations. However, inspection of the children's protocols does not support this explanation, as many children used all three types of cognitive processing across the JHTST. Secondly, that the children were at an early level of resistance functioning whereby they had not learnt why it was wrong to steal. They simply had associated wrongness or naughtiness with stealing.

The evidence given in the first alternative explanation also largely discounts this second possibility as being able to account for the preference for right/wrong responding.

The third alternative suggests that many children related to certain situations in such a way that they used summary statements which refer to the wrongness of stealing. These summary statements presumably come to the child's mind when he is confronted with a temptation situation, and thereafter help to guide his behaviour in that situation. The nature of these summary statements may be influenced by the kind of temptation situation as well as his accepted notion of the general wrongness of stealing. In this

sense the concept of summary statements are compatible with Jackson's (1968) view of cognitive schemata. For instance, the child may say, "it's wrong", "it's stealing", or "it's naughty" when asked why s/he didn't steal. These summary terms are not specifically related to a concern for the owner or to a consideration of the consequences of detection, but instead to a general concept of the wrongness of stealing. This is not to say that the concept of wrongness of stealing cannot be found to be based on some form of intrinsic or extrinsic consideration. The point is that it is the general concept of wrongness or the right/wrong schema as it occurs to the child in the form of a summary statement or schema which guides his/her responding and therefore is the true cognitive process responsible for his/her action. The way the cognitive process and response are functionally linked in these data supports the earlier conception of a temptation to steal situation as having a temptation phase characterised by a high level of cognitive activity which functions to guide the child's response in the outcome phase.

The main finding from the across situations analysis was significant increase from 'did do' to 'should do' on each of the resistance cognitive categories, with the largest mean increase on the extrinsic category. The within situation analysis demonstrated that the situation per se, had a considerable influence on the kind of cognitive processing schema the children used in each of the eight situations on both the behavioural ('did do') and moral judgement ('should do') measures.

### 8.3 GENERAL CONCLUSION OF STUDY I

Data from both Part 1 and Part 2 of Study I indicated that on the 'did do' measure the majority of children resisted on the situations (1 and 4) which clearly identified an owner. Additionally many of the children who resisted on these situations used intrinsic and right/wrong motives to guide their decision making. As intrinsic motives especially represent a morally advanced form of reasoning, training children to use such motives would seem desirable.

One of the practical implications of this research would therefore appear to be that a program with educable mentally retarded children, based on the teaching of an intrinsic schema, such as consideration for the owner, may significantly facilitate the children's resistance behaviour in temptation to steal situations. Research into the efficacy of this type of program will be undertaken in Study II.

LITERATURE REVIEW TO STUDY II

## CHAPTER 9

## THE MODIFICATION AND TREATMENT OF STEALING BEHAVIOUR

Various approaches have been used to modify the behaviour of children who steal. These include:

1. Detention in state corrective institutions.
2. Changing the juvenile's home environment.
3. Psychotherapy including crisis counselling.
4. Structuring the youth's time through probation rules.
5. School activities and employment.
6. Fining the youth and/or his family.
7. Moral judgement training.

Not all of these approaches have been subjected to rigorous research and those that have been have often yielded ambiguous results. Some approaches used are believed to be rehabilitative for juvenile offenders, however, no thorough research has been done proving their effectiveness (Wax, 1977).

It is not the aim of this study to examine these kinds of approaches to the modification of stealing. Rather the focus of this present study is to look specifically at research concerned with developing cognitive-behavioural approaches to stealing prevention and treatment. This research will now be considered.

### 9.1 COGNITIVE-INFORMATIONAL APPROACHES TO SHOPLIFTING

As shoplifting is often treated as a separate category in the research literature, and because it has attracted many approaches which are shoplifting-specific it will be discussed separately in this review.

The anti-shoplifting campaigns have been mainly based on cognitive informational programs. The strategy used has been to post signs in shops indicating that shoplifting is a crime. This approach seems to have had the effect of increasing public awareness of the consequences of shoplifting or increasing the threat of detection. In any case, it seems to have had only limited success in reducing shoplifting rates (Spain, 1977). However, McNees, Egli, Marshall, Schnelle and Risley (1976) found that when merchandise that was frequently taken was identified by signs and stars shoplifting decreased to zero. Further research is therefore indicated.

Although the shoplifting statistics cannot be broken down into retarded and non-retarded offenders, so that a comparison could be made, it could be argued that a campaign based on 'signs' would have only a negligible preventative effect on retarded shoppers as many of these people have limited or no reading skills. Accordingly the overall results of an anti-shoplifting campaign using 'signs' only may be that a greater proportion of retarded compared to non-retarded potential shoplifters would be apprehended. This approach would seem to have disadvantages for the non-reading retarded person.

Another approach to decreasing shoplifting has been to influence shoppers to report shoplifters. Bickman and Green (1974) adapted Latane and Darley's (1970) cognitive model of bystander intervention. The model consisted of five points: (i) noticing the event; (ii) interpreting the event as an emergency; (iii) taking responsibility; (iv) deciding how to intervene; and (v) intervening.

Bickman and Green (1974) suggest that most programs only emphasise points (ii), (iii) and (iv), however actual intervention by way of shoppers reporting shoplifting does not seem to result.

In applying Latane and Darley's (1970) model, Bickman and Green (1977) found that when a confederate defined the situation (Point (i)) and suggested reporting it to the manager (Point (v)) this had a strong influence on the subject's decision to report the incident, whether or not signs were posted conveying information about the correct action to take. In fact, signs alone had no effect, even if placed where the theft had occurred. These findings suggest the relative effectiveness of interpersonal influence over non personal means of communication in motivating shoppers to report shoplifters.

Although not strictly a cognitive-informational approach, direct restitution and symbolic restitution in the form of community based services have been used to modify shoplifting.

Restitution has operated in two forms, direct and symbolic. Direct restitution has required the offender to confront the victim and return the stolen property. Wax (1977) stated that this corrective approach has proved to be of limited effectiveness as it has been hard to find victims who have been willing to supervise offenders. Also, in most cases juvenile thefts reported to juvenile courts have been thefts already recovered. Many courts have turned to symbolic restitution in the form of community service. To date symbolic restitution/community service has produced promising but modest results (Wax, 1977).



## 9.2 SOCIAL LEARNING THEORY AND THE TREATMENT OF STEALING

Two basic types of management strategies have been identified:

### (i) Contingency Management

Contingency management procedures have been effective in modifying a wide range of social and academic behaviours amongst retarded children (Becker, Engelmann and Thomas, 1975). However there appears to be a paucity of reported studies on the application of contingency management procedures to the problem of stealing in the retarded. Indeed only relatively few researchers have used contingency procedures with normal children and adolescents to curb the problem of stealing.

Some of those who have reported such studies have attempted to apply contingency procedures within the juvenile delinquent's natural environment. In a Behavioural Research Project in America, community-trained teachers, parents, and other adults in the child's natural environment used reinforcers "to modify delinquent and pre-delinquent behaviour such as stealing ... following the principles of 'contingency management'" (Tharp, Wetzel and Thorne, 1968). A rationale for this kind of approach to stealing has come from Tharp (1971) who has argued that the individual's functioning is influenced by significant others in his social context. Therefore the social and other significant contextual aspects of the individual's environment are in need of change rather than just the deviant individual. The process of change "requires that we view every member of the system as equally needful of a homeostasis (Tharp, 1971, p. 5)".

Consistent with this view, parents and other mediating agents should maximise the use of positive influence techniques and minimise negative confrontation (Stuart, 1971). The use of a positive form of contingency management by significant others follows from this analysis.

A major barrier to the management of stealing has been determining the responsible party for the theft. In the research with juvenile delinquents it has been established that the children have a history of anti-social behaviour such as stealing. The monitoring of their behaviour and application of contingency procedures therefore becomes simpler because the children have been isolated for treatment. In the classroom, however, where a group of children confronts the teacher it becomes somewhat more difficult to detect bona fide theft and the responsible person (Switzer et al, 1977). In the absence of a reliable method of dealing with stealing, teachers often resort to managing misbehaviour by lecturing to the children about what the school rules are, and the consequences of violating them. Such methods have not usually been found to be effective in significantly altering classroom behaviour (Herman and Tranontana, 1971; O'Leary, Becker, Evans and Saudargas, 1969).

Classroom management literature however has suggested that using group plus individual consequences is a powerful procedure for increasing appropriate behaviour (Greenwold, Hops, Delquadri and Guild, 1974). Consistent with this literature, Switzer et al (1977) conducted a well designed multiple base line study to reduce stealing in second graders by using a

group contingency. The authors compared an anti-stealing lecture method with non specific contingency to a direct group contingency method. In order to reliably measure the incidence of stealing, ten items were placed around each room daily. In the group contingency procedure the teacher would indicate to the class that if she did not find anything missing in the morning they could have ten minutes of free time. After this statement data was collected at 15 minute intervals. At the end of the last 15 minute interval, an observer (a teacher's aide) discreetly signalled the teacher as to the nature and number of items stolen. Following this the teacher indicated she knew what was missing, and added that she was going to leave the room for 2 or 3 minutes. If on her return the object(s) was/were put back then they could have their free time, if not, then they were to sit quietly. In short, three components were involved in the group contingency: (a) positive reinforcement for no thefts; (b) restitution of existing privileges for the return of stolen items; and (c) punishment for failure to return items.

The findings of the study significantly favoured the group contingency method. However the authors did state that the specific factors leading to the effectiveness of this method could not be readily identified. They have stressed that, in a group contingency the individual responsible for the theft was punished directly. Thus while the group contingency was seen as working by peers exerting pressure on each other not to steal, it was also seen as working directly on individual

members of the group.

Switzer et al (1977) have cited several problems that could exist if attempts were made to apply their procedure to normal classrooms. They referred to the need for a reliable method of theft detection. They suggested that teachers could at least maintain an accurate assessment of teacher-owned items. Another possible problem raised by the authors was that of the validity of thefts reported by students. They noted that the group contingency procedure might reduce the number of reports which the children were uncertain about. Also they felt it might result in children not reporting thefts for fear of negative peer pressure over loss of free time, or because free time was more important to the child than was the missing item. They concluded their comments by a call for a more precise method of theft detection!

In addition to Switzer et al's (1977) own concerns with the group contingency procedures, other problems seem apparent with this method of control in the classroom. The method penalises those children who do not engage in acts of theft. In this way it works against the rights of the child. This type of unfairness may engender a revenge motive in those children who have been honest. That is, they may steal to make the child who has been stealing experience what it is like to be punished when you have done nothing wrong. This method may also create negative attitudes toward the teacher because the technique is perceived as being unfair. Furthermore if the procedure was used in a special class, the honest retarded

children may not understand why they have been penalised. The procedure is not educationally instructive in the sense that it does not specify why a child should not steal. Instead the procedure encourages a fear of detection in the child and thereby teaches the child to avoid stealing because of the external consequences.

(ii) Family Therapy

Family therapy like contingency management has been based on the theoretical rationale that the individual's functioning has been shaped and developed by significant others in his social context. Indeed, Patterson, McNeal and Hawkins (1976) coined the concept of 'reprograming the social environment' in order to harness family forces to alter deviant behaviour.

Patterson's techniques for the management of delinquent behaviour in the home have been based on the following assumptions:

- "(1) ... behaviours associated with delinquency are social behaviours that are acquired and maintained, in a large part, by the process of social reinforcement;
  - (2) the primary locus for the initial development of social behaviours is in the home, and;
  - (3) the place to start in the prevention of delinquency is with the pattern of social reinforcement that occurs in the homes of pre-delinquent children"
- (Reid and Patterson, 1976, p. 124).

Patterson has made it clear that if delinquent behaviours were to be extinguished then all social systems for children must be reprogramed. However, he has suggested that the home provides a logical starting point because the social system is simpler than many others, and also because the child would be

influenced profoundly in the developmental stages by family interaction.

Reid and Patterson (1976) reported that a group of families with deviant members who stole, were not as responsive to treatment as another group of families with non-stealing but deviant members. Following this finding, an analysis of stealers, non-stealers and normal children on positive-friendly and negative-coercive measures was performed. The lowest rates of negative exchange behaviour in the families of the three groups were normals, stealers, and non-stealers respectively. The highest rate for positive exchange behaviours were normals, non-stealers, and stealers. Reid and Patterson (1976) interpreted this finding as suggesting that the low rate of positive (and negative) social exchange in the family of stealers "gives the picture of a rather boring family climate that may, in fact, serve to motivate the child to seek out his developmental experiences and positive reinforcers in unsupervised, extra family settings" (p. 133). This interpretation of the data still remained consistent with the implementation of a parenting program.

Of 34 stealing referrals made to a parenting program only 10 actually began treatment. The drop out families were characterised by a marked level of disorganisation. The children in these families were typically unsupervised for long periods each day and the parents were involved in work schedules which kept them from spending much time with their families. Reid and Patterson (1976) suggested that the ten families

in the program presented a pattern of problems different from families of social aggressors. The families missed appointments and failed to complete assignments. The parents were unable to track their children's behaviour. Also the parents spent much of their time with activities away from home. Additionally, the parents failed to identify stealing behaviours of their children as theft. They either ignored instances of stealing behaviour, or recategorised it so that it did not appear deviant. The program managers stated, "This sort of relabelling of stealing as the child finding things, trading for things, or being given things by an unnamed benefactor prevented the parents from recognising stealing when it occurred and consequating it" (Reid and Patterson, 1976, p. 134).

Furthermore, as the parents were not greatly disturbed by the children's stealing behaviour they were not generally highly motivated to institute an intervention strategy. So a plan had to be devised to cope with the parents who were not motivated to manage their children's behaviour even after being told of their high rate of stealing. To enlist unmotivated parents' cooperation it had been decided to use extrinsic reinforcers such as a parenting salary, preventing the juvenile court from taking custody of the child, and the therapist reinforcing parenting behaviour through daily phone calls. During the first treatment sessions parents were specifically instructed in the defining of stealing, and in tracking and monitoring the child's behaviour. In fact, a continuous knowledge of the child's whereabouts was a condition of treatment.

With the exceptions of the planned extrinsic reinforcers and the first treatment sessions indicated above, the treatment of stealers was the same as for socially aggressive boys. This included base line and further observation probes, collection of parent report data, reading the parent book, training in tracking and counting behaviours, and designing and executing modification programs. One additional component was added. Because stealing did not lend itself easily to measurement by professional observers, a new data collection procedure was devised. The parents were phoned every day after the initial contact and asked whether any stealing had come to their attention during the previous 24 hours. If stealing had occurred a series of questions on the stolen objects was asked: its value, the place where the stealing occurred, whether the child was alone or not when he stole, and what the parents did about the act, and so on.

At this point in time Reid and Patterson (1976) reported that an analysis of only 7 of the 10 families in the program had been completed. It was established that in 4 cases stealing was eliminated, and in one case it was reduced when the parents followed the parent management programs and consistently consequated stealing. In one of the other two families, the child said she stopped stealing to please the therapist, and in the other, the family dropped out of the program.

The family therapy approach to the treatment of juvenile stealing seems to be worthy of serious consideration. The



practice of readjusting the immediate social milieu of the offender appears to be a robust method of bringing stealing behaviour under control. Although the notion of reprogramming a deviant child's social systems has obvious appeal, the practical constraints on this type of exercise must be kept in mind. A detailed examination of Reid and Patterson's (1976) attempts at this type of reprogramming in the home environment indicate that there are a number of practical limitations. These limitations were as follows:

(1) As Reid and Patterson (1976) indicated, two thirds of the referred cases to their program dropped out. This self-selection procedure suggests that the remaining third were more highly motivated to undergo the program. This variable must be taken into account when evaluating the effectiveness of the parent programming strategy.

(2) Also the program organisers used extrinsic reinforcers (for example, parenting salaries) where it was necessary to keep parents motivated to fulfil their obligations in the program. The effective ingredient in the program may be the extrinsic reinforcers rather than the content of the program, per se.

(3) An essential ingredient in the program package was the reading and working through of exercises in a parenting book. This procedure would seem to lend itself more to the verbal, literate parent than those less motivated or skilled to analyse book materials.

(4) A definition of stealing incidents seems a necessary component of the program. However, this specific definitional training was extended to the parents only, presumably because they were controlling the child's behaviour by consequenceing it. It may also be useful to teach the child to accurately define stealing behaviours. The phenomenon of rationalising away, or negating the stealing episode, as really another category of behaviour, would then be minimised. Definitional training aimed at the child may also help him to control his own behaviour.

(5) The phone call method of collecting data also raises questions. Parents may get tired of answering a series of questions each day over the phone. Indicating that the child does not steal anymore may be negatively reinforcing because it stops the phonecalls. As Reid and Patterson (1976) have stated, stealing behaviour was not directly punishing to the parents. The authorities, police, welfare officers, counsellors and others who contacted the parents seemed to be the most punishing aspect of their child's stealing. A report of successful treatment would stall this pressure. This argument questions the reliability and validity of this data collecting procedure, and the subsequent findings of the parent programming procedure.

It can be seen that attempts at reprogramming the social system in the home to make it more positive and less negative and punishing has achieved a degree of success, but still has certain problems. However, this should not cause such attempts

to be abandoned. It simply means the methodology of this approach needs to be improved. One overriding aspect of reprogramming the contingencies in a social system, with respect to the treatment of stealing, remains that the child is being brought under external control. Basic to the philosophy of social reprogramming is the view that the social system largely determines the child's behaviour. Although this viewpoint is not being fundamentally challenged, it would seem in the case of stealing behaviour that direct training to teach the child to resist temptation also warrants the attention of the researcher. Even though social systems strongly influence behaviour, in the final analysis, the responsibility for prosocial or antisocial behaviour rests with the individual. Accordingly direct training to help the individual resist antisocial acts and to engage in prosocial behaviour has clear merit.

In short, it is contended that research on reprogramming social systems should continue. However, research on teaching children to control their own behaviour in temptation to steal situations should also be pursued.

### (iii) Overycorrection

Barton, Guess, Garcia and Beier (1970) found that timeout from reinforcement reduced the stealing of food by profoundly retarded persons by only 57 per cent over a period of 24 meals. Azrin and Armstrong (1973) dealing with the same problem, indicated that a simple correction by restitution procedure

yielded positive results. In a later study Azrin and Wesolowski (1974) applied an overcorrection procedure to stealing behaviour. Simply stated, the overcorrection principle suggests that the thief be required to give the victim more than he had stolen. The overcorrection procedure effectively and almost immediately eliminated theft by all the retardates in the study. The authors suggested that overcorrection was so effective because it:

- "(a) Terminated reinforcement for the theft by withdrawing the stolen items,
- (b) was a negative reinforcer because it required effort when the additional item has to be obtained,
- (c) constituted a timeout from positive reinforcement, in that the thief was interrupted for a period of time in his other activities, and
- (d) was re-educative in that the thief practised the positive action of giving snack items to the victim" (p. 580).

The overcorrection procedure must be regarded as one method the clinician may use to modify stealing behaviour in the retarded.

In an extensive review, Axlerod, Brantner and Neddock (1978) have critically re-examined the overcorrection procedure. They have suggested that a partialling out of the behavioural techniques which are often an integral part of the overcorrection package is necessary before it can be established what unique contribution the overcorrection procedure, per se, makes to a behaviour modification program. Further, they have challenged the comparative effectiveness of the procedure by citing examples of alternative techniques which have been relatively

more successful than the overcorrection procedure. The review also identified certain negative side effects of the overcorrection technique. From a conceptual systems viewpoint Axelrod et al (1978) stresses the relationship between overcorrection and the punishment process. Overall, the authors indicate the need for a more rigorous scientific analysis of the overcorrection procedure.

Clearly there are also specific limitations to the overcorrection procedure when applied to the stealing situation. Firstly, the overcorrection strategy depends on detection of the theft. Restitution corrective procedures used with shoplifters have been stifled by the problem of getting the victim to supervise the restitution. Also the procedure is somewhat negated when the victim has already recovered his property. The value of the item stolen would seem to be a relevant consideration before implementing an overcorrective procedure. If it takes a long time to repay a debt, the offender may be motivated to steal again in order to expedite the payment of his original debt. It is not uncommon for offenders to say they stole in order to pay outstanding fines. Also the offender may regard it as unfair or inequitable justice for him to have to pay more than the item is worth. This may be especially confusing to the retarded offender. Finally, the main emphasis in the overcorrection procedure may be perceived of as punitive rather than re-educative. Further to this point, Parke (1977) has shown that a rationale procedure was more effective than punishment in facilitating children's resistance to temptation.

### 9.3 COGNITIVE TRAINING AND STEALING

Various forms of cognitive training have been used extensively with normal and retarded children to modify and develop a range of behaviours. Cognitive procedures have been employed to modify 'cognitive impulsivity' responses (Finch et al, 1975), 'hyperactivity' (Moore and Cole, 1978), problem solving skills (Ross and Ross, 1973, 1978), behaviour problems (Camp et al, 1977), resistance to temptation (Fry and Preston, 1979; Mischel and Patterson, 1970, 1978) and 'stealing' behaviour (Guidry, 1975; Stumphauzer, 1976).

As indicated in the review to Study I, cognitive strategies of the self-regulation kind include such covert procedures as self-observation and self-reinforcement. These covert procedures are subject to the same behavioural principles which govern overt behaviours. Based on these theoretical foundations, Guidry (1975) successfully treated a compulsive stealer of some ten years duration by using a covert punishing contingency. Specifically the client imagined a stealing sequence followed by an imagined aversive consequence, for example, getting caught.

Also, in a study by Stumphauzer (1976) stealing behaviour in a 12 year old girl was eliminated by self-reinforcement of alternative behaviour and family contracting. The first part of the procedure utilized self-control techniques. The child role-played seeing the usual kinds of things she would steal and alternated to interesting things and

activities she could shift her attention to which were followed by self-reinforcement (for example, I am proud of myself). Also when she did not steal she was to use self-reinforcing language. In the second part of the procedure simple family contracts were used which comprised of shifting parental and school attention away from stealing to non-stealing. Primary and social reinforcers were used for each day of non-stealing. Following treatment and at follow-ups (6, 12 and 18 months) there was no return of stealing behaviour.

Currently researchers within the resistance to temptation paradigm have also focused on self-regulation procedures. In a recent review on increasing children's self-control through cognitive interventions Pressley (1979) drew a distinction between the self-regulation procedure of self-reinforcement, and cognitive intervention which aimed to directly change cognitions. Put differently, self-reinforcement could be seen as consequating covert and overt behaviours and increasing or decreasing its future probability, while cognitive interventions of the self-instruction kind attempts to change the child's thought structures.

Meichenbaum (1977) has suggested a rationale for self-verbalisation training. He suggested that a child's inappropriate task performance and behaviours have been largely due to the child's use of poorly organised cognitions, such as sub-vocal speech, thoughts, and images. Working with impulsive children,

Meichenbaum and Goodman (1971) used verbal self-instructional training which involved children progressively shifting from overt to covert self-instruction. This model of self-instructional training was used by Fry and Preston (1979) with a sample of normal 7 to 8 year old children to increase their resistance to temptation. These researchers also examined the individual effectiveness of the components in the self-verbalisation training sequence (overt, covert, and overt plus covert), as well as the interactive effects between these different types of training and children's locus of control. It was found that both boys and girls trained with a complete sequence of overt to covert speech self-verbalisation, and those who employed an internal locus of control, delayed gratification longer than any other combinations of treatment and locus of control.

Although not specifically utilizing Meichenbaum's model of self-verbalisation instruction, other researchers have experimentally examined the types of self-verbalisations which affect the self-control of pre-schoolers.

#### The Types of Self-verbalisation in Resistance to Temptation Paradigms.

Various types of self-verbalisations have been examined in delay of gratification studies. In a typical kind of delay of gratification study, pre-school children were assigned to a boring task and told that if they stuck to the task until the experimenter returned they could play with 'fun' toys, but if they ceased the task they would only get 'broken' toys to play



with. A clown box with a tape recorder attempted to distract the child throughout the task. Mischel and Patterson (1976, 1978) discovered that, (a) specific temptation-inhibiting verbalisations ("no, I'm not going to look at Mr. Clown box") was more effective than, (b) specific task-facilitating verbalisations ("I'm going to look at my work"), or (c) a control (no strategy) condition. Also conditions (a) plus (b) were no better than (a) alone. While (a) alone was no more effective than another condition, namely (d) a reward relevant verbalisation condition ("I want to play with the fun toys and Mr. Clown box later"). It was also found that when the children were asked to generate their own strategy that this was no more effective than the (c) control condition.

Toner and Smith (1977) indicated that when the 'reward' verbalisation of the kind, "the candy will taste good" was employed, self-control was decreased. A further study by Patterson and Mischel reported by Pressley (1979) demonstrated that children provided with a specific verbal plan resisted the temptation better than children who were not given a specific plan. It was further shown that with a verbal plan condition both the internal and external cues produced greater self-control than unspecified cues. Moreover, the provision of a specific verbal plan without a specific cue for execution of the plan produced no increase in self-control over no provision of a plan.

Overall these results have suggested that even pre-schoolers could use a verbal strategy to control their own

behaviour. However, the specific content of the strategy largely determined the effectiveness of the strategy. Specific temptation inhibiting, and reward-relevant temptation strategies were the most effective. Evidence has suggested that reward-relevant verbalisations which emphasise the consummatory aspects of rewards tend to decrease self-control. Therefore, how the child 'thinks' of the reward must be regarded as a highly relevant aspect of self-control intervention strategies.

The findings on the relationship between self-verbalisation strategies and self-control with pre-schoolers should give the educator of the mentally retarded child cause for optimism. As has been noted, the kind of self-verbalisations the child is able to employ depends on his cognitive developmental level. If pre-schoolers can employ self-verbalisation strategies then retardates of a comparable MA should similarly be able to utilize such strategies to control their own behaviour.

Other experimental investigations into the variables influencing self-control have included affective variables, cognitive transformations, and attentional variables.

(a) Affective variables. Mischel, Ebbeson and Zeiss (1972) showed that children would wait longer for a preferred reward when they were instructed to think 'fun' thoughts than if they were provided with no cognitive strategy. Also in an experiment where a group of pre-schoolers were instructed to think 'sad' thoughts they were less likely to wait for rewards than no affect control subjects (Moore, Clyburn and Underwood, 1976). Fry (1977) found that children with induced happiness

(happiness related to a success experience) resisted temptation to play with toys more than children who were sad (because of a failure experience). Failure children furthermore deviated more quickly than did a group of control children. It would appear then that when a child self-produces happy thoughts that the child will be more likely to resist the temptation of an immediate reward, or the temptation to quit a dull task. Self-produced sadness has been shown to produce the reverse effect.

(b) Cognitive transformations. Mischel and Baker (1975) in a four group condition experimental design found that pre-schoolers who mentally transformed food for which they were waiting, compared to those who concentrated on the consummatory aspects of another food waited longer. This and other experiments (Patterson and Mischel, 1975; Yates and Millman, 1978) demonstrated that pre-schoolers could imaginally transform stimulus situations so as to produce better control behaviour.

(c) Manipulations of attention. It has been well established that externally provided activities during a delay period produce increased self-control in delay of gratification situations (Mischel et al, 1972; Perry and Parke, 1975). A series of investigators have shown that paying attention to rewards in a delay of gratification situation decreases self-control (Mischel and Moore, 1973; Toner and Smith, 1977). Research on the issue of attention to reward objects versus pictures of reward objects found that the child's cognitive orientation during exposure to either stimulus determined his length of delay of gratification. For example, it was found that thinking about

the arousing aspects of the picture of the rewards was conducive to less self-control than just thinking of the picture. These data have shown that the attentional orientation of children could be manipulated so as to affect self-control.

In summary, the overall findings indicate that very young children can manipulate their cognitions when instructed to do so, and can have their cognitions manipulated in various ways so as to affect their self-control. What has not been done extensively to this point in time has been to compare cognitive strategies. Pressley (1979) has called for studies to determine if the ability to use self-control strategies is developmentally mediated.

The encouraging aspects of the many studies on pre-school children and self-control remains that the positive conclusions from such studies strongly suggests the applicability of cognitive strategies to increase self-control in mentally retarded children. This is not to infer, of course, that there would be a simple one to one correspondence between pre-school children's use of cognitive self-control strategies and mentally retarded children of comparable MA. Logically, although a mentally retarded child may have a similar mental age to a younger normal child, the older retarded child would have additional social or life experiences which would interactively affect his functioning in resistance to temptation situations. This statement gains support from research which has indicated that moral functioning involves an interaction of

factors including cognitive and social factors (Bandura, 1977; Kohlberg, 1976a).

Cognitive training procedures have also been used to develop problem solving skills (Ross and Ross, 1978).

### Cognitive Training and Problem Solving

The position taken in this thesis is that a temptation to steal situation is a problem solving situation. Stealing has further been referred to as a temptation problem solving situation with two possible problems confronting the child. The first problem consists of making a choice between resisting and yielding, and the second problem emerges if the child decides to resist. This latter problem involves planning an alternative way to legitimately acquire the desired object. Specifically the child must generate a set of alternatives and then select the most appropriate alternative. The components in this second type of problem relate directly to D'Zurilla and Goldfield's (1971) definition of problem solving:

" ... a behavioural process, whether overt or cognitive in nature, which (a) makes available a variety of potentially effective response alternatives for dealing with the problematic situation, and (b) increases the probability of selecting the most effective response among these various alternatives" (p. 108).

It would appear then that training programs to reduce stealing may be strengthened by a problem solving component. This suggestion has direct relevance for the retarded. Research has shown that retarded children lack skills in everyday problem solving (Ross and Ross, 1971). Ross and Ross (1973, 1978) have found however, from social situation problem exercises, that with

sufficient training educable mentally retarded children could significantly improve in the skills of the generation of solutions, and the evaluation of the best alternative solution.

Overall, there would seem to be a considerable body of research supporting the application of self-regulatory programs with any one of the following three components; self-reinforcement, self-instruction or problem solving. Additionally, self-control programs can involve complex multi-dimensional procedures (Sanders, 1978) which could include these three components.

Recently an attempt was made to combine self-instructional and problem-solving components into a self-regulatory program to facilitate resistance to stealing (Haines, Jackson and Davidson, 1980). This particular self-regulatory program was presented in a direct instruction format in a similar manner to that reported by Meichenbaum (1977), along with additional features. As this program was designed as a type of pilot program for the present study with educable mentally retarded children, it will be discussed next.

#### 9.4 A DIRECT INSTRUCTION PROGRAM TO FACILITATE RESISTANCE TO STEALING

It was decided to use a direct instruction format for the resistance training program because this type of teaching format has been shown to be highly effective in facilitating learning, especially amongst disadvantaged and retarded children (Becker and Carnine, 1978; Becker, Engelmann and Thomas, 1975). Also

there are distinct parallels between the direct instruction technology used to teach concept skills, and the self-instruction procedures embodied in the cognitive-behaviour modification methodology (Meichenbaum, 1977).

Self verbalisation instruction and concept training both involve a shift from overtized to covertized programing. Specifically, the trainer makes explicit every step in the strategy, at first prompting the learner to perform on every step. Over a number of training sessions the prompts are faded to the point where the task sequence has been covertized. The learner can then demonstrate his knowledge of the task sequence by repeating the correct series of responses overtly to the trainer without prompting. Covertization provides an essential link between teacher-directed and independent work (Becker, and Carnine, 1978), or between external instruction and self-control.

Cognitive-behavioural modification and direct instruction teaching models also utilize the principles of operationalised objectives and task analysis.

The content of the direct instruction program was based on Jackson's (1968) model of children's cognitive processing in hypothetical temptation to steal situations. As mentioned, the model consists of a series of stages; namely, (a) temptation problem; (b) sense of dilemma; (c) reflection/self-discussion; (d) retrieval of cognitive schemata; (e) decision to resist or yield; (f) post-decision responses. Since the children were being trained to resist only 'resistance cognitive schemata'

were taught. These schemata included: rule (internalised principle), right/wrong, example (model), friends, guilt, self-image, consequence, habit and self-control.

Another feature of Jackson's (1968) analysis of children's responses was that a few children used legitimate alternatives to achieve their goal. These children responded to the temptation to steal situation by following a two stage resistance pathway. That is, in the first stage they resisted the urge to steal, and in the second stage they planned a way to obtain their goal legitimately. This type of responding was viewed as both morally and socially acceptable and desirable. It was therefore included in the direct instruction resistance training program.

#### The Procedure of the Direct Instruction Program

In this program children were presented with hypothetical moral dilemmas, but a series of responses and response alternatives were indicated. The essence of this program was the acquisition of a set or chain of responses leading to a resistance response, possibly followed by a legitimate acquisition response.

The beginning of the chain consisted of a temptation problem situation (TPS); next came a characteristic initial reaction (IR) to the TPS. This commonly involves attention being focussed on an object, physical reacting such as heart racing and asking the question, "Will I or won't I take it?". This is usually the first decision making point an individual



reaches. His/her decision to yield or resist directs the individual thinking along a yield or resist cognitive pathway which terminates in a final yield or resist response. In this program an *a priori* decision was made that resistance was an acceptable response and yielding an unacceptable response. Accordingly, at the IR decision making point the child was taught to use the IR as a cue to direct him along the resistance pathway.

Decision making was also involved at the intermediate stages but morally defensible answers were provided. At the alternative response stage, further decision making was involved as subjects considered viable alternatives to yielding. The response chain was structured in order to enhance learning and retrieval (Loftus and Loftus, 1976).

As mentioned, following the TPS, the common initial reaction functioned as a cue to focus the child's thinking on additional response category cues, that is, think, feel, and behave, and response category order cues which aided him in recalling the schemata in the response category clusters and the remainder of the response chain terminating in a resistance response and finally a legitimate acquisition response.

The importance of cues in memory research is well documented (Tulving and Pearlstone, 1966). The resistance response chain described in Figure 15 was presented progressively over six sessions, and was repeated three times during the program. This was done to further enhance acquisition of the

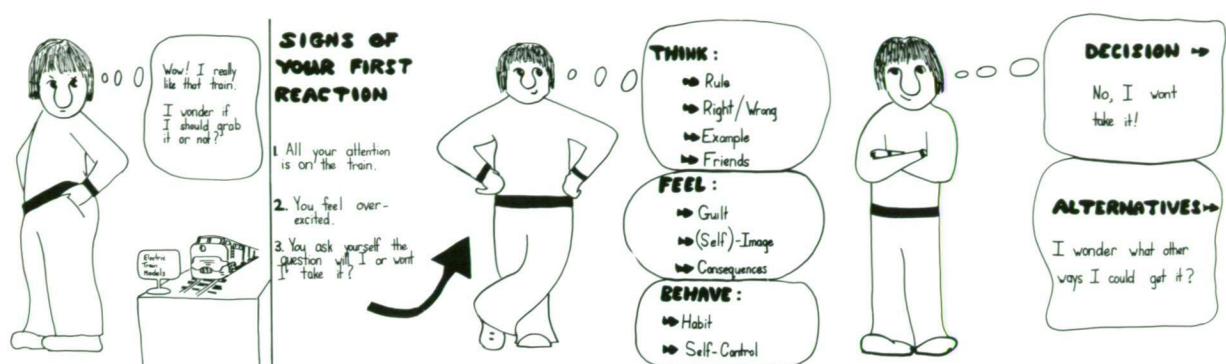


FIGURE 15 Serial Organisation of the Resistance Response Chain  
(reported by Haines, Jackson & Davidson, 1980)

resistance response chain. In the final stages of the program each child had to go through the resistance chain saying it aloud, without prompting, and was required to complete the chain by generating a legitimate alternative.

To test the effectiveness of the direct instruction program Haines, Jackson and Davidson (1980) conducted a study with normal children. The study utilized a direct instruction program as well as a general instruction program and a post only control group to partial out the effectiveness of the instructional procedures.

The general instruction program followed as closely as possible the procedure used by Blatt and Kohlberg (1975). This procedure was chosen as programs using Kohlberg's model have increasingly been used by schools in moral development courses.

It was found that the direct instruction teaching method was more effective than the general instruction program, in reducing children's resistance to stealing in hypothetical temptation to steal situations (Haines, Jackson and Davidson, 1980). As the direct instruction format has been shown to be a most effective teaching method with retarded children in other areas of learning (Becker and Carnine, 1978; Maggs and Patching, 1979), and also, as Study I has shown that educable mentally retarded children use the same kinds of cognitive processes in temptation to steal situations as normals, it was argued that a similar type of cognitively oriented direct instruction program with the retarded would be worthy of study.

## STUDY II

## CHAPTER 10

EDUCABLE MENTALLY RETARDED CHILDREN'S RESPONSES TO  
TREATMENT IN HYPOTHETICAL AND REAL-LIFE TEMPTATION  
TO STEAL SITUATIONS

## 10.1 THE PURPOSE

The main aim of this study was to compare the relative effectiveness of two treatment programs in facilitating educable mentally retarded children's resistance to the temptation to steal in hypothetical and real-life temptation situations.

## 10.2 METHOD

10.2.1 Hypotheses

It was expected that a direct instruction program group would produce greater resistance responding in hypothetical and real-life temptation situations than a general instruction program group or a no treatment control group. Further it was expected that there would be no significant differences between the general instruction program group and the no treatment control group. As reflections of these expectations a series of hypotheses were drawn up.

I (a) That a direct instruction program (DIP) group would produce significantly more resistance responses on the behavioural measure ('did do') of the JHTST than a general instruction program (GIP) group, or a no treatment control group.

(b) That there would be no significant differences in resistance responses on the behavioural measure between the GIP and no treatment control groups.

(c) That the post treatment resistance responses on the behavioural measure of the no treatment control group would not be significantly different from the post-only control group.

II (a) That the DIP group would produce significantly more children who become categorical resisters on the 'did do' measure than a GIP or no treatment control group.

(b) That there would be no significant difference in the number of children who become categorical resisters on the 'did do' measure between the GIP and no treatment control groups.

III (a) That a DIP group would produce significantly more legitimate alternative responses on the behavioural measure than a GIP group, or no treatment control group.

(b) That there would be no significant difference in legitimate alternative responses on the 'did do' measure between the GIP group and no treatment control group.

IV (a) That a DIP group would produce significantly more intrinsic resistance responses on the behavioural measure than a GIP group or no treatment control group.

(b) That there would be no significant difference in intrinsic resistance responses on the 'did do' measure between the GIP group and no treatment control groups.

V (a) That there would be no significant difference between the DIP, GIP, or no treatment control groups in resistance responding on the moral judgement ('should do') measure.

VI (a) That a DIP group would produce significantly more legitimate alternative responses on the 'should do' measure than the GIP group or no treatment control groups.

(b) That there would be no significant difference in legitimate alternative responses on the 'should do' measure between the GIP group and no treatment control group.

VII (a) That a DIP group would produce significantly more intrinsic resistance responses on the 'should do' measure than the GIP group or no treatment control group.

(b) That there would be no significant difference in intrinsic resistance responses on the moral judgement measure between the GIP group and no treatment control group.

VIII That there would be no significant difference between the DIP, GIP or no treatment control groups in general moral judgement on the clumsiness and stealing index.

IX That there would be no significant difference between the DIP, GIP and no treatment control groups in general moral judgement in the collective responsibility index.

X (a) That a DIP group would produce significantly more reflectivity than a GIP group or no treatment control group.

(b) That there would be no significant difference in reflectivity between the GIP group and no treatment control group.

XI (a) That a DIP group would not produce significantly more efficiency than a GIP group or no treatment control group.

(b) That there would be no significant difference in efficiency between the GIP group and no treatment control group.

XII (a) That a DIP group would produce significantly more resistance responses in the real-life temptation to steal situation than a GIP or no treatment pre-post control group.

(b) That there would be no significant difference in resistance in the real-life stealing situation between the GIP group and no treatment control group.

(c) That the post treatment resistance responses of the no treatment control group in the real-life stealing temptation would not be significantly different from the post only control group.

XIII (a) That a DIP group would produce significantly more resistance responses in the real-life temptation to cheat situation than a GIP group or no treatment control group.

(b) That there would be no significant difference in resistance in the real-life cheating situation between the GIP group and no treatment control group.

(c) That the post treatment resistance responses of the no treatment control group in the real-life cheating temptation would not be significantly different from the post only control group.

XIV (a) That there would be no significant difference in resistance responses on the behavioural measure between the DIP group post and follow up measures.

(b) That there would be no significant difference in resistance responses on the moral judgement measure between the DIP group post and follow up measures.

XV That there would be no significant difference in intrinsic resistance responses on both the behavioural and moral judgement measures between the DIP group post and follow up measures.



### 10.2.2 Design

The experimental design selected basically corresponded to the pretest-post test control group design (Campbell and Stanley, 1963). This design controls for most problems of internal validity. The design chosen however, also incorporated a post only control group.

A four group design was used. The groups, each of which consisted of 27 children, were delineated as follows:

Two treatment groups

(a) Direct Instruction Program (DIP) group

(b) General Instruction Program (GIP) group

Two control groups

(c) No treatment Pre and Post Control group. When referred to hereafter this group will be termed the no treatment control group.

(d) No treatment Post Only Control group. Hereafter this group will be referred to as the post only control group.

The no treatment control group was included to control for the possibility of improvement merely as a function of time. The post only control group was designed to measure the degree to which the no treatment control group improved on the JHTST and real-life resistance to temptation situations as a result of sensitization on the pretest measures of the JHTST and real-life measures alone.

### 10.2.3 Subjects

A population of 115 educable mentally retarded children between 11 and 16 years of age, I.Q. 50 to 75 was drawn from children attending special schools in two major centres of Tasmania (Hobart and Launceston). Parental permission was obtained for 108 of the children. These 108 children were randomly allocated to one of four groups. The composition and defining characteristics of the four groups are shown below in Table 5.

TABLE 5  
Comparison and Defining Characteristics of the  
Experimental and Control Groups

	DIP Treatment Group	GIP Treatment Group	No Treatment Control Group	Post Only Control Group
<u>Number:</u>				
Males	19	20	20	18
Females	8	7	7	9
Total	27	27	27	27
<u>Age:</u> Mean	153 mths	159 mths	156 mths	158 mths
Range	133-191 mths	136-189 mths	132-187 mths	134-194 mths
<u>IQ :</u> Mean	63	62	65	63
Range	50-74	50-75	51-75	50-75

### 10.2.4 Testing Procedures

As mentioned in Study I three trained experimenters, two female and one male, administered the pretest measures and one further female was employed to administer post tests. None of the testers, graduates in Psychology or Education, was

acquainted with the hypotheses of the experiment.

The pre and post treatment measures included:

Kagan's Matching Familiar Figures Test (MFFT)(1964) to measure reflection/efficiency;

Stephens tests of collective responsibility and clumsiness and stealing (Mahaney and Stephens, 1974) to assess the children's general moral judgement level; and

Jackson's Hypothetical Temptation to Steal Test (JHTST) (Jackson, 1968) as a measure of both behavioural and moral judgement in hypothetical temptation to steal situations.

Real-life temptation measures included a stealing and cheating test.

The study was divided into approximately three six week intervals which corresponded to the pretesting, treatment, and post testing periods. A three month follow up testing over a three week period of the DIP was an additional feature of the study.

### Pretesting

In order to minimise the possible sensitization effects that testing may have on the treatment procedures the study was designed in such a way that there was a delay interval between testing and treatment for each child. For this experimental design purpose children in the direct instruction program group (DIP) and general instruction program group (GIP) were randomly divided into two sub-groups; hereafter labelled DIP 1 and DIP 2, and GIP 1 and GIP 2.

The DIP 1 and GIP 1 children were tested over the first three weeks of the six week pretest period, and the DIP 2 and GIP 2 children over the following three weeks. The pre-post control group children's pretesting ranged over the six week period. All children were tested individually.

#### Treatment Procedure

The treatment period extended over six weeks. The treatment sub-groups DIP 1 and GIP 1 were treated for the initial three weeks, and then the DIP 2 and GIP 2 children were treated for the following three week period. This procedure fulfilled the requirement of providing a delay interval between testing and treatment.

Each of the DIP and GIP children were given ten sessions of 20 minutes over the three week training period, four sessions in each of the first two weeks and two sessions in the third week.

Four experimenters conducted the training sessions. To control for extraneous effects, each trainer was required to treat approximately seven DIP and seven GIP children, who were randomly assigned to the trainer. Again none of the experimenters was aware of the hypotheses of the experiment.

#### Post Testing

To allow for a meaningful test of the effectiveness of the treatment programs and to diminish the interaction between testing and treatment, the direct instruction program sub-group (DIP 1) and general instruction program sub-group (GIP 1) were post tested over the first three weeks following the cessation of

the treatment period. The second of the sub-groups in both treatment groups (DIP 2, GIP 2) were then tested over a three week period. The pre-post no treatment control group and post-only control group were tested over the six week post test period.

#### Follow Up Testing

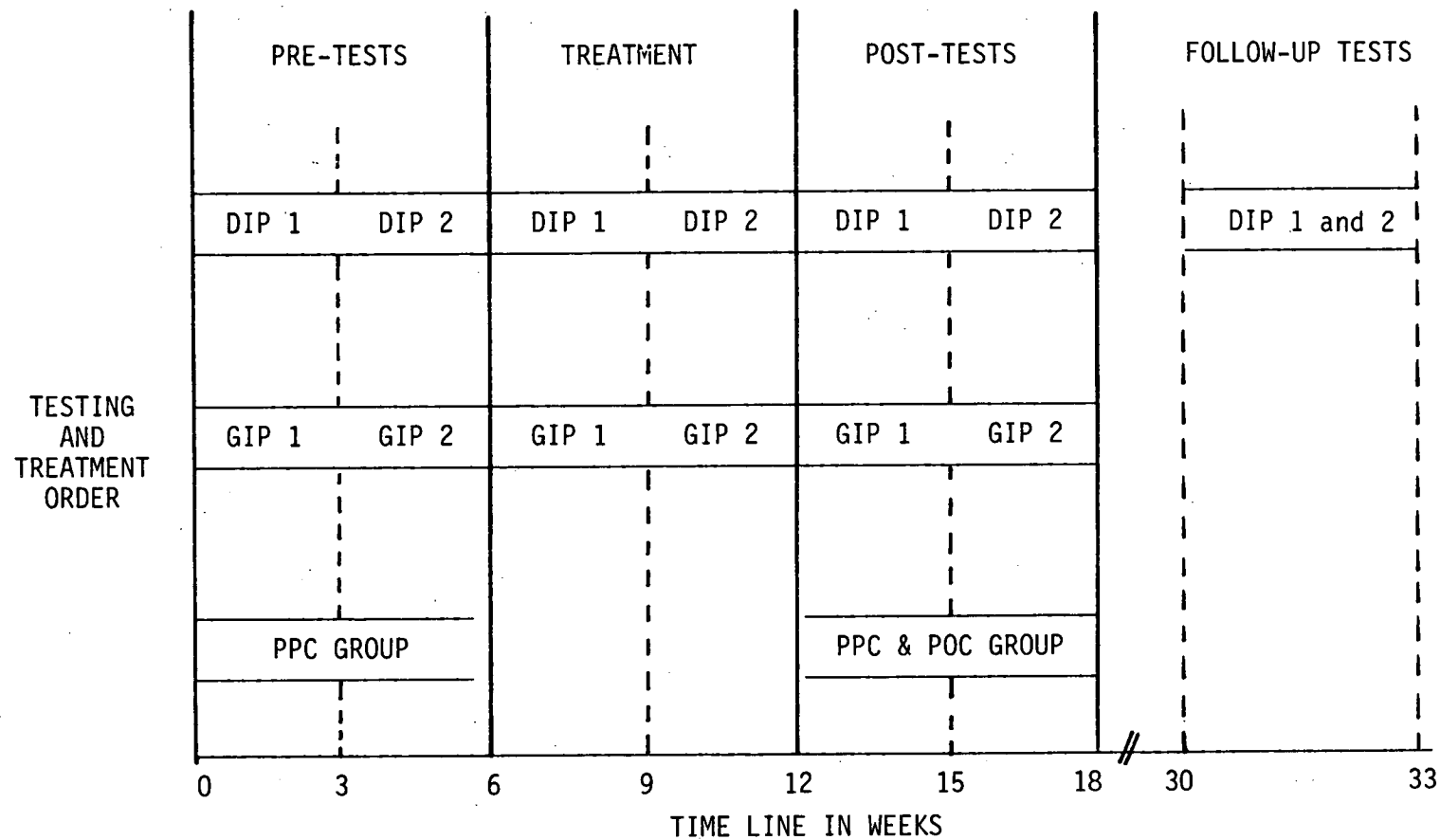
It was hypothesised that there would be a significant increase in resistance responding on the DIP group. Therefore a three month follow up on the DIP group was incorporated in the design to assess whether any change from pretest to post test would be maintained.

A schematic outline of the study is provided in Figure 16.

#### 10.2.5 The Treatment Programs

General Instruction Program. For the purposes of this thesis the GIP was defined as an awareness training procedure whereby a child would be taught to think about the issues related to stealing. However, the child would be required to discover for him/herself the critical components in a stealing dilemma and to make his/her own decision on whether to yield or resist. No moral directives were offered to the children in this type of program. Specifically the essential features of the GIP were:

- (i) to expose the child to a range of pictorially represented temptation to steal situations;
- (ii) to provide the child with issues to help him/her focus his/her attention on the problem of stealing from a number of perspectives;



KEY

DIP 1, DIP 2 Direct Instruction Program  
sub groups 1 and 2 respectively  
GIP 1, GIP 2 General Instruction Program  
sub groups 1 and 2 respectively

PPC No treatment control group  
POC Post only control group

FIGURE 16 Testing and Treatment Timetable for Study II

(iii) to allow the child to establish what was 'wrong' with stealing without the experimenter specifically indicating the 'right' and 'wrong' response in a situation. That is, no moral absolutes were given to the child. It was reasoned that in this way the child might be expected to integrate the information in a discussion of stealing perspectives at his own level.

The General Instruction Program Procedure. Each child was individually trained for ten, 20 minute sessions over three weeks. The content of the program involved specific discussion of temptation to steal situations. These situations are given in Appendix III - A. The following is an example of one of the conflict situations used :

"Jan/Fred looked at the comics on the stand. S/he thought to herself/himself, 'Wow! I would really like one of those Superman comics. The comic looks just like the movie of Superman'. Jan/Fred knew that s/he did not have any money and therefore could not buy one. S/he looked around and could not see anybody looking at her/him. S/he then looked hard at the Superman comic again and wondered if s/he should quickly grab it and run."

Each child individually discussed approximately two problem situations with the experimenter during each 20 minute session.

A slide apparatus was used to project pictures of the stories used during training to both the GIP group and the DIP group. This procedure was followed to facilitate the educable

mentally retarded children's comprehension of the temptation to steal stories. The slide relating to the above story is shown in Figure 17.

As the slide relating to each temptation problem was projected onto a screen the experimenter read out the details of the conflict situation. Following the presentation of the story, which was always in third person in order to maintain the undirective nature of the program, the experimenter presented sequentially 17 issues related to the stealing situation, and represented in the form of probe questions details of which may be found in Appendix III - B. An example of some of the probes and issues covered however are indicated here:

<u>Issue</u>	<u>Probe</u>
General reference	Do most people take things that they want? Why/why not?
Model's behaviour	Do you think that a friend of yours would steal from you, or anyone? Why/why not?
Law	The law is made up of rules. One rule says that it is not right to steal. Do you think it is a good rule? Why/why not?

The concept of using issues was based on the notion that stealing can be influenced by any one of a number of motives. Some of these include, financial needs, peer pressure, attitude to the law, influence of esteemed models, and so on. It was





FIGURE 17      An Example of a Slide of a Temptation Situation  
Used in the GIP Program

reasoned that a child should be encouraged to view a temptation to steal problem situation from all kinds of perspectives and to think about the stealing in relation to these perspectives.

Every child was encouraged to discuss each issue. The experimenter did not tell the child what he thought was the right or wrong answer. The experimenter's role was merely to act as a catalyst for discussion and to attempt to keep the child's responses relevant to the issues being discussed. If the child was in favour of stealing the experimenter posed a question centred around - how the child would feel if someone stole from him, and the question, 'if everyone stole, how could anyone own anything?; and does it make it right to steal just because someone else does?

#### The Direct Instruction Program

Specifically, the DIP is based on the assumption that the precise, careful analysis and presentation of elements and issues relating to stealing should be defined, clarified and taught directly to children. One of the other features of such a program is that learning is not left to chance.

The essential features of the DIP were:

(i) to ensure that the child had acquired the concept of 'ownership' (yours/mine distinction).

(ii) to define and present the processes involved in the resistance to stealing program into a step-by-step teaching sequence as defined by Haines, Jackson and Davidson (1980).

(iii) to delineate and order the processes involved in the resistance to stealing program into a step-by-step teaching sequence as defined by Haines, Jackson and Davidson (1980).

(iv) to provide pictorial representations of the processes outlined in the resistance program.

(v) to provide decision-making opportunities for the child throughout the resistance program.

(vi) to provide corrective feedback contingent on the child's resistance or yielding decisions.

(vii) to present a range of everyday temptation to steal situations for the child to engage in problem solving.

(viii) to allow the child to choose a legitimate alternative way of getting his goal, and

(ix) to give the child an opportunity to act out his chosen alternative via a simulated roleplay with 3-D models.

The Direct Instruction Program Procedure. Each child was individually trained for ten, 20 minute sessions over three weeks. In order to facilitate learning to the resistance chain, a special treatment apparatus was constructed.

Treatment Apparatus. The treatment apparatus was in most respects similar to the testing apparatus. However, there were two notable differences. Firstly, the experimenter was seated beside the projector in the same room as the child. This was necessary as part of the training procedure involved close trainer-child interaction. Secondly, the child had a display panel in front of him/her with two buttons on it. A red button

marked NO and a green button marked YES. S/he was taught the association between colour and label. The display panel was installed so that the child could indicate his/her decision to resist or yield during exposure to temptation to steal situations (see Figure 18a). The wires from the display panel led to a box with a green and red bulb which corresponded to the display panel buttons, and was situated near the experimenter (see Figure 18b).

Training Procedure. The ten training sessions consisted of concept training and assessment during the first session, and resistance training using the treatment apparatus, on the following nine sessions. The concept and resistance training procedures will be discussed separately.

#### Concept Training and Assessment (Session 1) (Appendix III - C).

As the concepts of ownership and stealing along with a definition of a temptation to steal problem were fundamental to the resistance training program it was critical to establish the subjects' comprehension of these concepts.

Session 1 - Procedure. Using a concept assessment procedure similar to that employed by Becker, Engelmann and Thomas (1975), the concept of ownership was first tested. A card sorting task formed the basis of this evaluation. Both the experimenter and child wrote their names on a card and then each drew a different picture on three other cards. The experimenter then placed the 'name' (label) cards on the table and jumbled the remaining picture cards. S/he then asked the child to sort



FIGURE 18a The Display Panel with the 'NO' and 'YES' Decision Buttons



FIGURE 18b The Box with the 'Red' and 'Green' Bulbs Indicating to the Experimenter Which Decision the Child Has Made

the picture cards under the correct 'name' label. The child had to place all the cards correctly (the instances and non instances) on three consecutive sorts. On each sorting the 'name' labels were switched to minimise the order learning effect (see Figure 19a). Next the 'name' labels were replaced by 'yours' and 'mine' labels. In an earlier study Jackson (1969) had emphasised the need to make certain that children discriminated between the 'yours' and 'mine' concept in relation to possessions.

During the yours/mine concept assessment the experimenter also gave the child training in the concept of 'being fair'. Each time the child completed a successful yours/mine sort, s/he repeated after the experimenter, "Being fair means you say, 'I can take mine but cannot take yours; that's treating the other person as you would like to be treated'. The same sorting procedure as used previously was then repeated (see Figure 19b). Following this procedure, the yours/mine labels were replaced by 'own' and 'do not own' labels and again the same concept assessment procedure repeated (see Figure 19c).

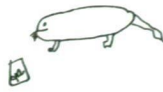
The next main concept to be discussed was that of 'stealing'. Stealing was defined to the child as 'taking something without asking the owner'. An exercise was then conducted which consisted of teaching the defining characteristics of a temptation to steal situation, as well as repeating the definition of stealing.

The experimenter took out two boxes and labelled Box 1 with his/her name and Box 2 with the child's name. The experimenter put a jelly bean in his/her box and asked the child,

CARMYL  
(Subject's writing & sketches)

ALLAN  
(Experimenter's writing & sketches)

CARMYL rat



ALLAN'S RAT



CARMYL tree



ALLAN'S TREE



CARMYL cat



ALLAN'S CAT



FIGURE 19a 'Name' Labels Which the Child Used to Sort His/Her Drawing From the Experimenter's Drawing

MINE

YOURS

CARMYL rat



ALLAN'S RAT



CARMYL tree



ALLAN'S TREE



CARMYL cat



ALLAN'S CAT



FIGURE 19b 'Mine/Yours' Labels Which the Child Used to Sort His/Her Drawing From the Experimenter's Drawing



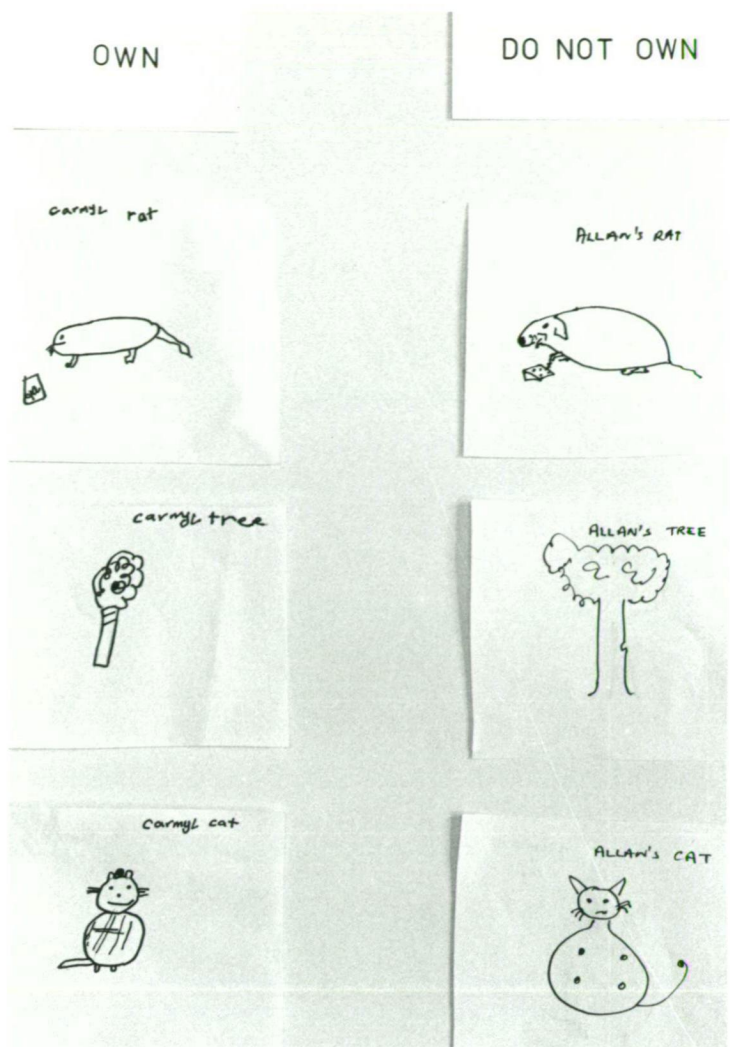


FIGURE 19c 'Own/Do Not Own' Labels Which the Child Used to Sort His/Her Drawings From the Experimenter's Drawing



FIGURE 19d 'Name' Labelled Boxes to Indicate Ownership



"Do you want that?" The experimenter then said, "If I turned away and you really wanted that jelly bean you would get excited - you could probably feel your belly getting excited - and then you would say to yourself - will I take it or not! If you did take it, what would you be doing? The experimenter gave the child five seconds to respond and then said, "If you take something without asking the owner, you are - stealing. Say, 'Stealing is taking something without asking the owner. What is stealing?" The child said after the experimenter what stealing was.

This procedure was repeated with two other temptation stimuli.

Additionally the notion of achieving the item legitimately was introduced again using the owner labelled boxes and models to concretize the examples (see Figure 19d). For example, the experimenter said, "How do you think you could get the pen without taking it?" The child was given five seconds to respond, then the experimenter said, "You could ask the owner if you could have it, or you could ask a friend or your parents if you could borrow or have a lend of some money so you could buy a pen, or you could save the money up, or you could do some jobs and earn the money for the pen. Let's go over those ways you can get something without taking it."

Sessions 2 to 10 - Resistance Training. The contents of the resistance training per se, were similar to that presented by

Haines, Jackson and Davidson, 1980). However, in this earlier program the child was required to define, or recognise the stealing situation, then to recall nine schemata, and on the basis of these schemata to resist and then make a legitimate acquisition response. Due to memory limitations, the retarded child was only required to recall one schema. This schema "Be Fair", was chosen as it represents a rule the child can internalise, and is morally superior to some of the more externally oriented schemata. Other corrective features were also added to facilitate learning of the resistance sequence.

Resistance training with the DIP involved presenting the child with a series of slides synchronised with verbal instructions which the child was required to repeat. There were four phases of self-verbalisation resistance training (see Appendix III - D). During the initial training sessions the child slowly repeated each key word presented by the instructor. As sessions progressed the child was given less verbal prompting by the experimenter, until during the final two sessions the child was required to recall the resistance chain unassisted. The format of the resistance chain is represented in Figure 20 below.

Example of a Training Session. The child, seated behind the screen, was told to imagine s/he was the boy/girl in the temptation situation which was on the slide in front of him/her (see Figure 21a). The experimenter then told the child s/he would be able to

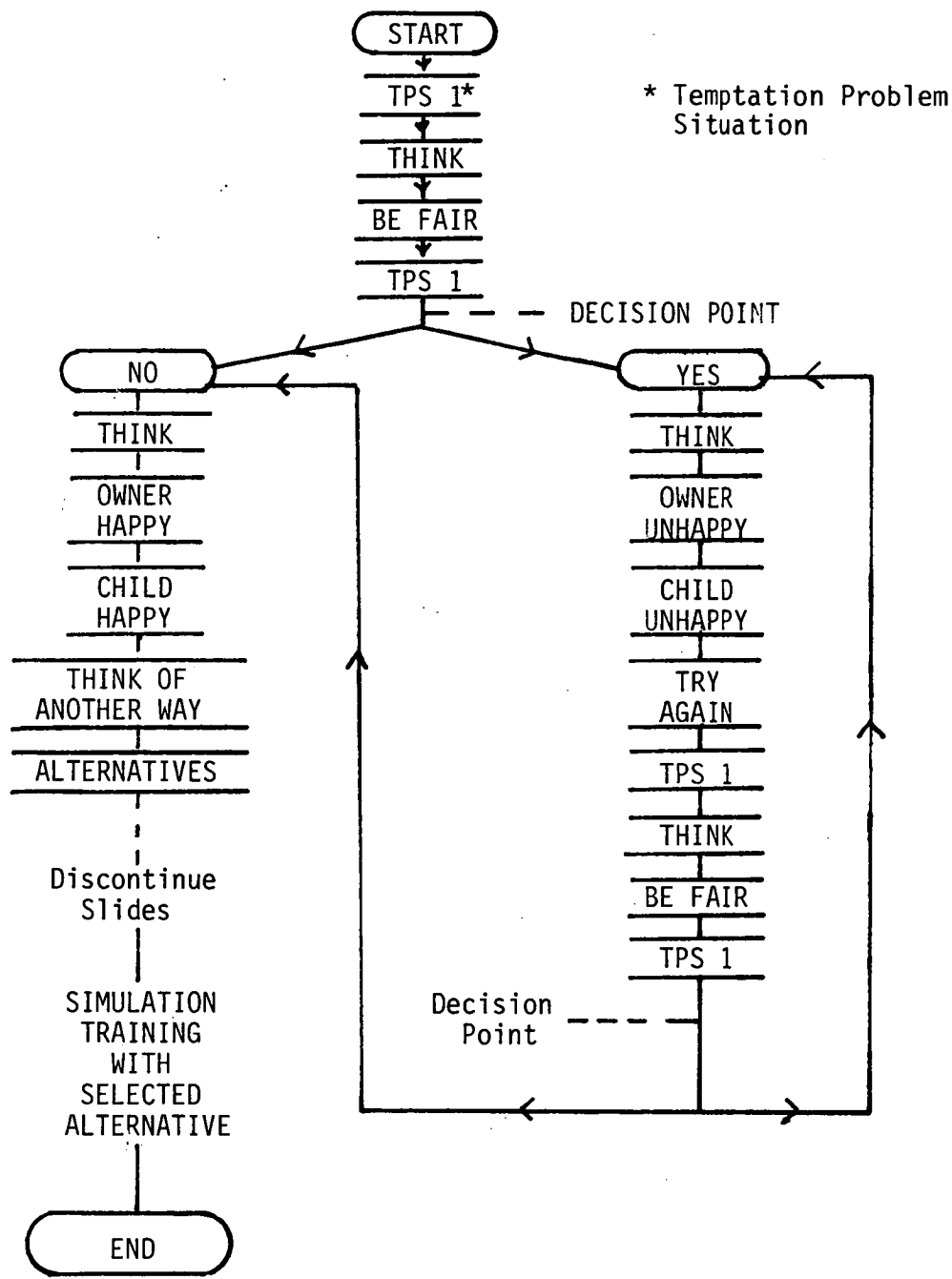


FIGURE 20      FORMAT OF SLIDE PRESENTATION OF THE RESISTANCE CHAIN

recognise a temptation to steal situation by the cue words he would say to himself/herself, "Will I take it or not?" After repeating this phrase, the slide changed to a THINK slide (see Figure 21b) which was designed to make the child 'reflect' before making a decision. The child repeated "think". Next came a BE FAIR slide (see Figure 21c), after repeating the key phrase designed to give the child an internal rule to guide his decision, for example, 'Treat others as you would like to be treated'. The original temptation situation slide was represented (see Figure 21d). At this stage the child was required to make his/her decision and indicate it by pressing the YES or NO button in front of him/her.

In order to more closely approximate a real temptation to steal situation the child was given the opportunity at points throughout the training to make a decision to steal or not to steal. A NO choice represented resistance and a YES choice represented yielding.

NO Choice. If the child pressed the NO button, the following slides and verbal instructions sequentially appeared to reinforce the child's decision and further guide his response: THINK, BEING FAIR MAKES THE OWNER HAPPY (owner is represented smiling), BEING FAIR MAKES YOU HAPPY, THINK, TRY AGAIN. These slides are presented in Figure 22a,b,c,d,e respectively. During this final slide the child was required to select from a split screen, which had pictures of four ways of obtaining the desired



FIGURE 21a The Temptation Problem Situation Slide



FIGURE 21b The 'THINK' Slide



FIGURE 21c The 'BE FAIR' Slide



FIGURE 21d The Temptation Problem Situation Slide



FIGURE 22a The 'THINK' Slide

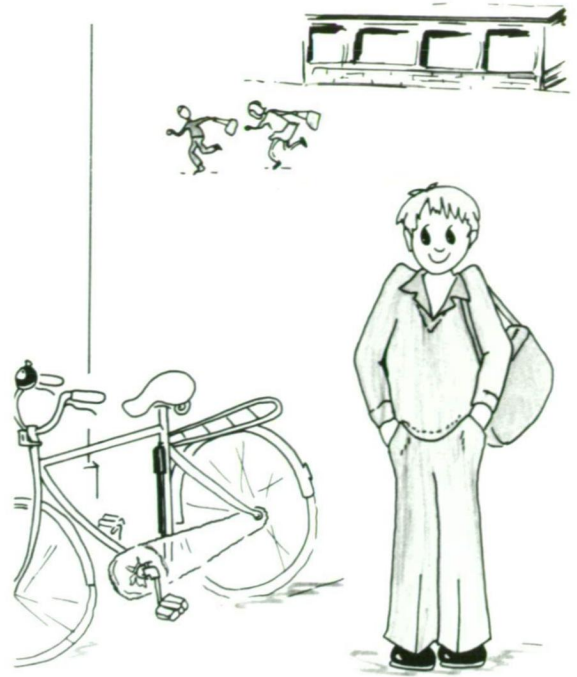
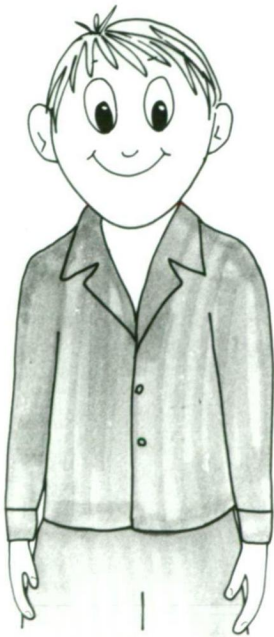


FIGURE 22b The 'Being Fair Makes the Owner Happy' Slide

FIGURE 22c  
The 'Being Fair Makes the Child Happy' SlideFIGURE 22d  
The 'THINK' SlideFIGURE 22e  
The 'Try Again' Slide

object without stealing. They were: saving, asking a parent, doing odd jobs, collecting bottles. This has been defined as legitimate alternative training. The child selected which alternative s/he would like to try. The alternatives were: do odd jobs, ask parents, collect bottles (see Figure 23). The slide session stopped, and the child and experimenter then 'acted out' one of the four alternatives.

#### The Legitimate Alternative Training (Appendix III - E)

The child 'acted out' his/her chosen alternative using three dimensional models. It was suggested that the three dimensional concrete mode of instruction with only task relevant verbal input would facilitate learning of the legitimate alternatives with the retarded more than a highly verbal method of instruction. This suggestion was made for the following reasons:

1. An instruction format based on three dimensional objects and figures permits the retarded child to grasp the content of an instruction rapidly because the message is externalised. The child can actually see a visual representation of the message.
2. Further, because he can manipulate the objects or figures essential for the message, he is able to control the rate of input.
3. Because he can actually see the consequences of the message to the three dimensional figures he is able to benefit from instant, observable feedback. It should be noted that feedback indicating correct and incorrect responses

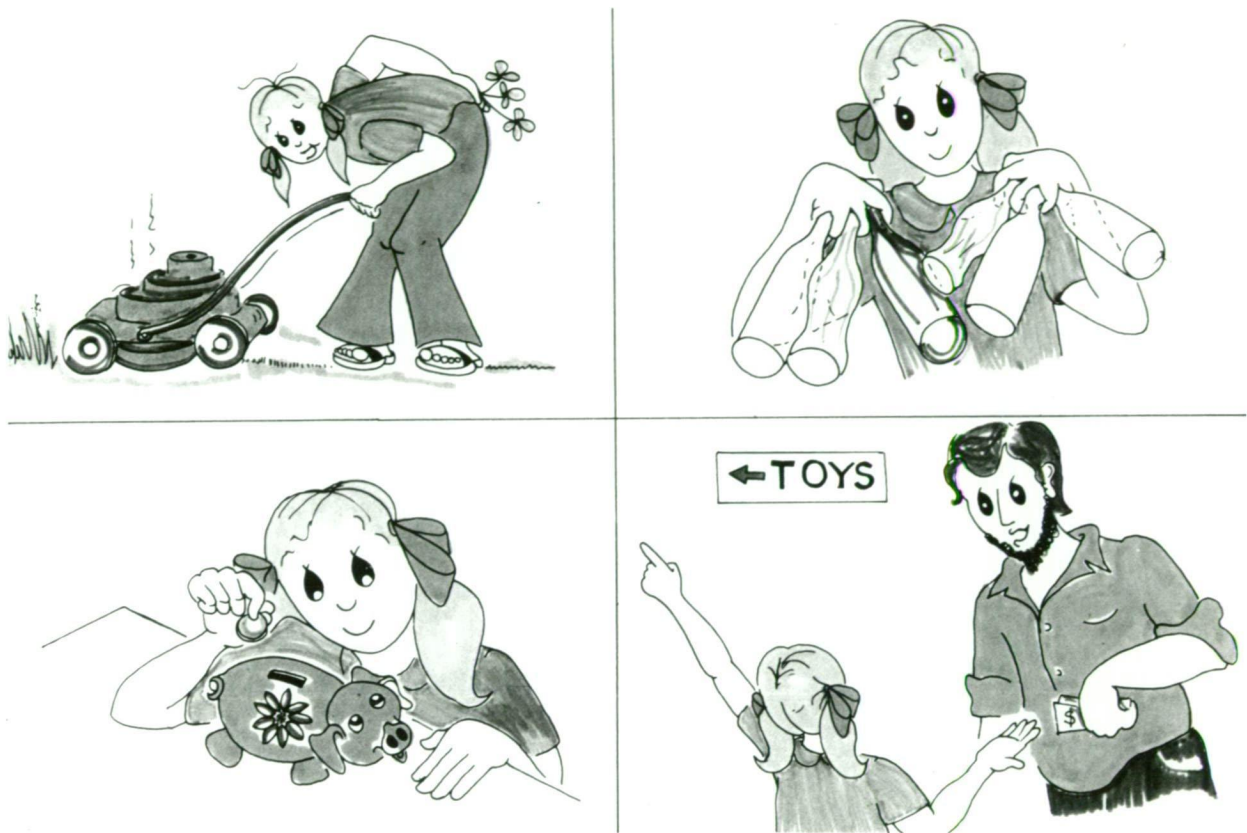


FIGURE 23      The 'Legitimate Alternatives' Slide



is basic to concept learning (Meyer and Offenbach, 1962). It also provides reinforcement for the child's response. 4. The utilization of three dimensional figures would also seem the most parsimonious way of permitting the child to review and practise the point of any message. Review and practice also facilitate concept learning. 5. Because the child has control of the form and rate of responding he is able to function at his/her own individual learning level. This minimises the retardate's feeling of insecurity and anxiety. The obvious spinoffs are that attention and motivation are not hindered. Attention and motivation have been shown to be critical for efficient learning. 6. It also seems that three dimensional figures and objects present a stimulating stimulus complex for the child to attend to. Scott (1966) has stated the two major variables controlling those behaviours classified as attention: (a) reinforcement; (b) the nature of the stimulus display.

An example of a legitimate alternative training session is given in Figure 24a,b. The child's name was attached to the scale model s/he manipulated so that s/he could more readily identify with the scale model. At the commencement of the acting out of the alternative means of attaining a desired object the experimenter reminded the child of the temptation situation s/he resisted in, and then set out the relevant stimulus materials for the child to simulate his/her legitimate alternative. In performance of odd jobs alternative of mowing the lawn (Figure 24b) the experimenter, represented by an adult

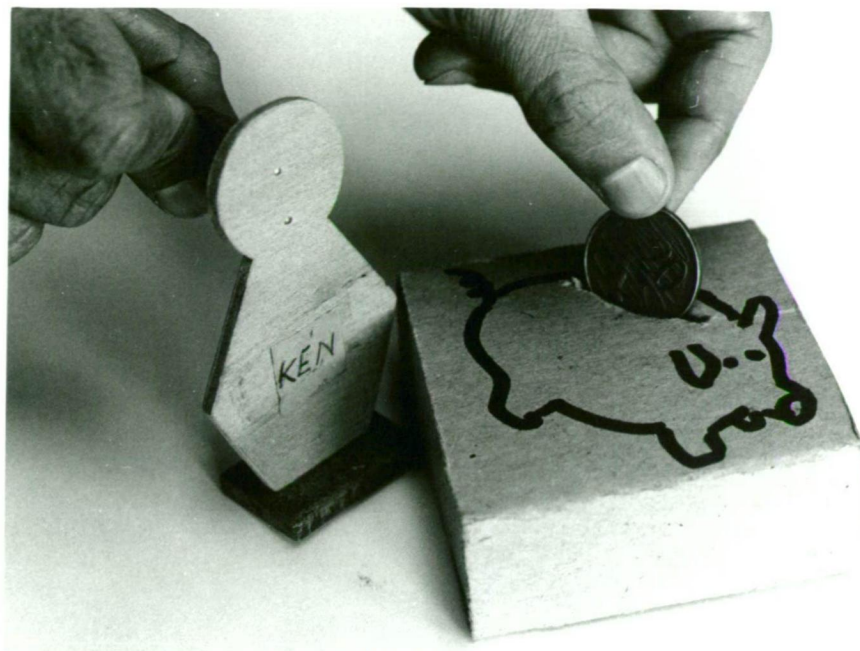


FIGURE 24a      The Legitimate Alternative Training of  
'Saving Money'



FIGURE 24b      The Legitimate Alternative Training of  
'Doing an Odd Job'

scale model, would pretend s/he was sitting in the garden. The child would then have to approach the adult model and suggest that s/he would mow the lawn for a small fee. The adult model would agree to this request. The child would then manipulate his/her scale model to push a toy lawn mower up and down a desk several times. Following this the adult model would pay the child the money for the completed job.

YES Choice. If the child pressed the YES button the following slides and verbal instruction appeared in order to correct the child's response: THINK, NOT BEING FAIR MAKES OWNER UNHAPPY, NOT BEING FAIR MAKES YOU FEEL SAD, TRY AGAIN. These slides are represented in Figure 25a,b,c,d respectively. At this point the earlier sequence of slides leading up to the point of making a decision were repeated. The child could only press the YES button twice, after this s/he was directed to press the NO button. This procedure was introduced to ensure that the child could experience the reinforcing effects of the correct decision and have practice 'acting out' legitimate alternatives.



FIGURE 25a The 'THINK' Slide



FIGURE 25b The 'Not Being Fair Makes the Owner Unhappy' Slide

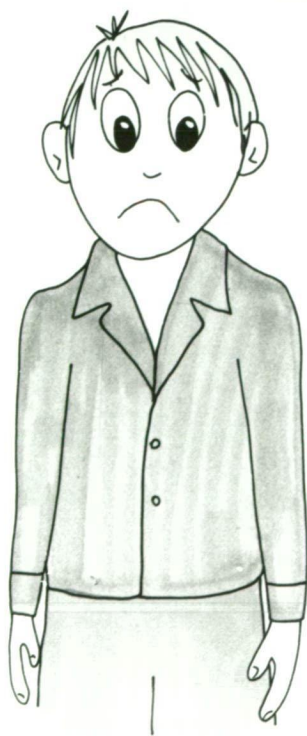


FIGURE 25c The 'Not Being Fair Makes the Child Feel Sad' Slide



FIGURE 25d The 'Try Again' Slide

## CHAPTER 11

### R E S U L T S

#### 11.1 DATA ANALYSIS

The pre-and post-treatment scores for the subjects in each of the experimental and control groups on all measures were calculated. These data and the group means are shown separately for each measure in Appendix IV - A to J. For a number of the analyses the "Teddybear Statistical Program" (Wilson, 1978) was employed. Results will be discussed separately on each of the measures.

#### Resistance on the Behavioural Measure of the JHTST

One of the main aims of the present study was to establish whether educable mentally retarded children's resistance behaviour in hypothetical temptation to steal situations could be increased by the application of treatment programs. In order to evaluate this aim an analysis of the experimental and control groups' performance on the behavioural measure of the JHTST was conducted and compared.

Group mean resistance scores on the behavioural measure ('did do') at the pre-treatment and post-treatment are shown in Figure 26 for each of the three groups. It is clear from Figure 26 that the DIP group increased their resistance scores while those of the GIP group and no treatment control group were relatively stable.

Analysis of covariance was carried out on the pre- and post-treatment measures to evaluate the significance of the above trends. Covariance analysis was selected to partial out the

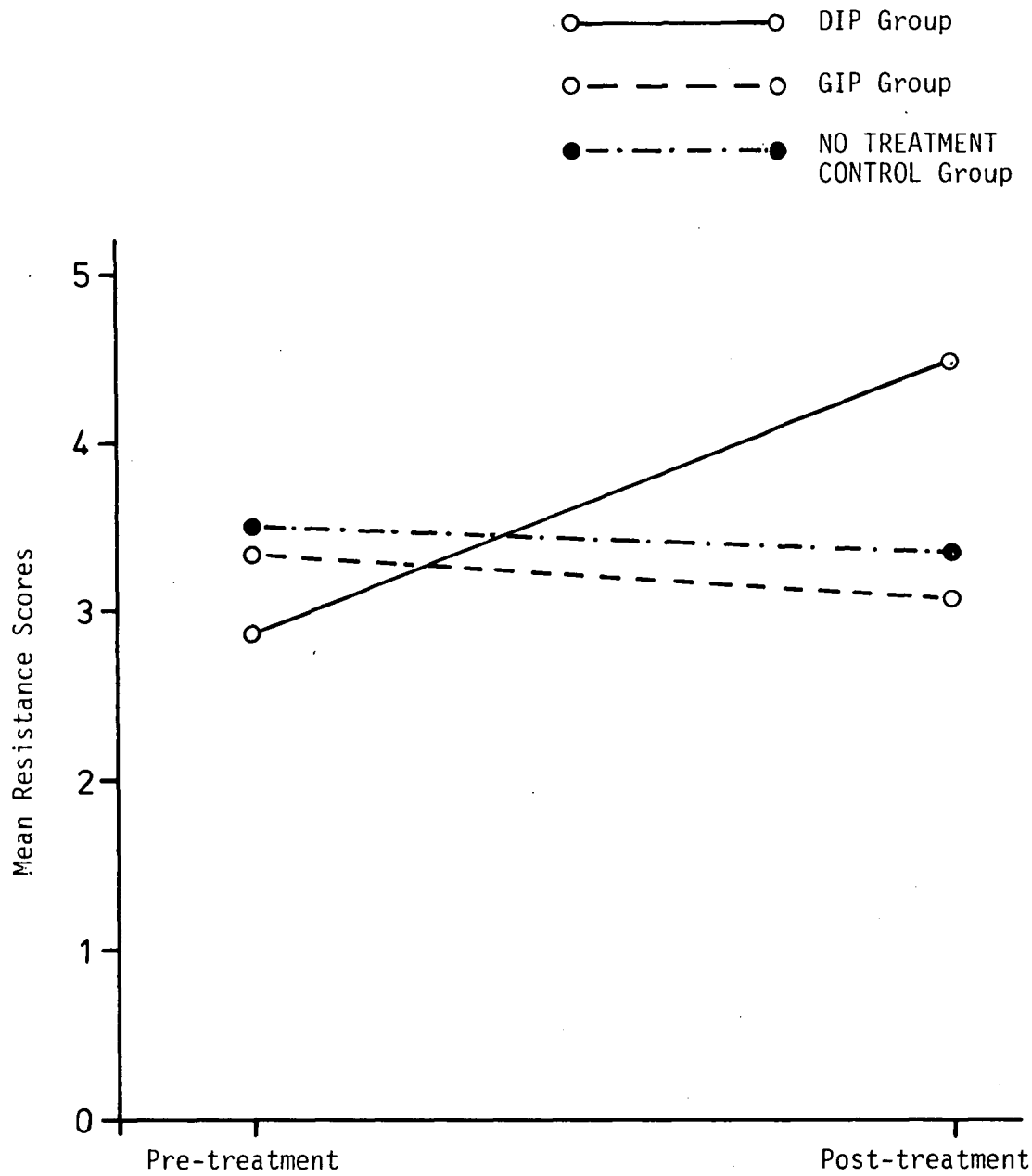


FIGURE 26      Mean Changes in Resistance Scores on the 'Did Do' Measure for the 3 Groups

effects of differences between pre-treatment group means. In this analysis the criterion measure was the post-treatment scores while the pre-treatment scores were used as the covariate. Results show that the F ratio is significant at the .05 level (Appendix IV - K) indicating that at least one significant difference exists between the experimental and control groups ( $F[2,78 = 3.59; p < .05]$ ). A Duncan's New Multiple Range test was performed on the adjusted post test means to determine which inter-group differences were significant. These findings indicate that the DIP group differed significantly from both the GIP group and no treatment control group ( $p < .05$ ) and that the GIP group did not differ significantly from the untreated group ( $p > .05$ ). Therefore the hypotheses I(a) and (b) regarding differences in resistance on the behavioural measure between the DIP, GIP and no treatment control groups were supported.

Although the no treatment control group scores indicate no group mean improvement from pre- to post-tests, the overall design of the study involved a post only control group to test specifically for sensitization effects occurring by repeating the JHTST. Therefore a t test was performed on the no treatment control group and post only control group scores. No significant difference resulted between the control groups (means were 3.48 and 2.96,  $t = .81, p > .05; df = 52$ ). This finding is consistent with the mean lack of improvement in the no treatment pre-post control group. Therefore, Hypothesis I(c) was confirmed.

Although the comparison of the experimental and control group means indicated a statistically significant increase in the

DIP group relative to the GIP and no treatment control groups, inspection of the subjects' pre- and post-scores suggested that only a small number of children improved dramatically. In order to further clarify this observation the pre- and post-treatment raw data of the DIP, GIP and no treatment control groups was plotted (Figures 27a,b,c). These figures highlight that most of the dramatic improvement occurred in the DIP group. It was decided to further inspect the raw data by constructing a table of substantial improvers (defined as 4+), slight improvers (1-3), slight regressors (-1-3) and substantial regressors (-4). The results are shown in Table 6.

TABLE 6  
Degree of Change from Pre to Post Test  
On The Three Groups

Level of Resistance Change Score	DIP	GIP	No Treatment Group	
	4+	7	0	1
	1-3	6	9	6
	0	8	6	11
	-1-3	5	8	7
	-4	1	4	2



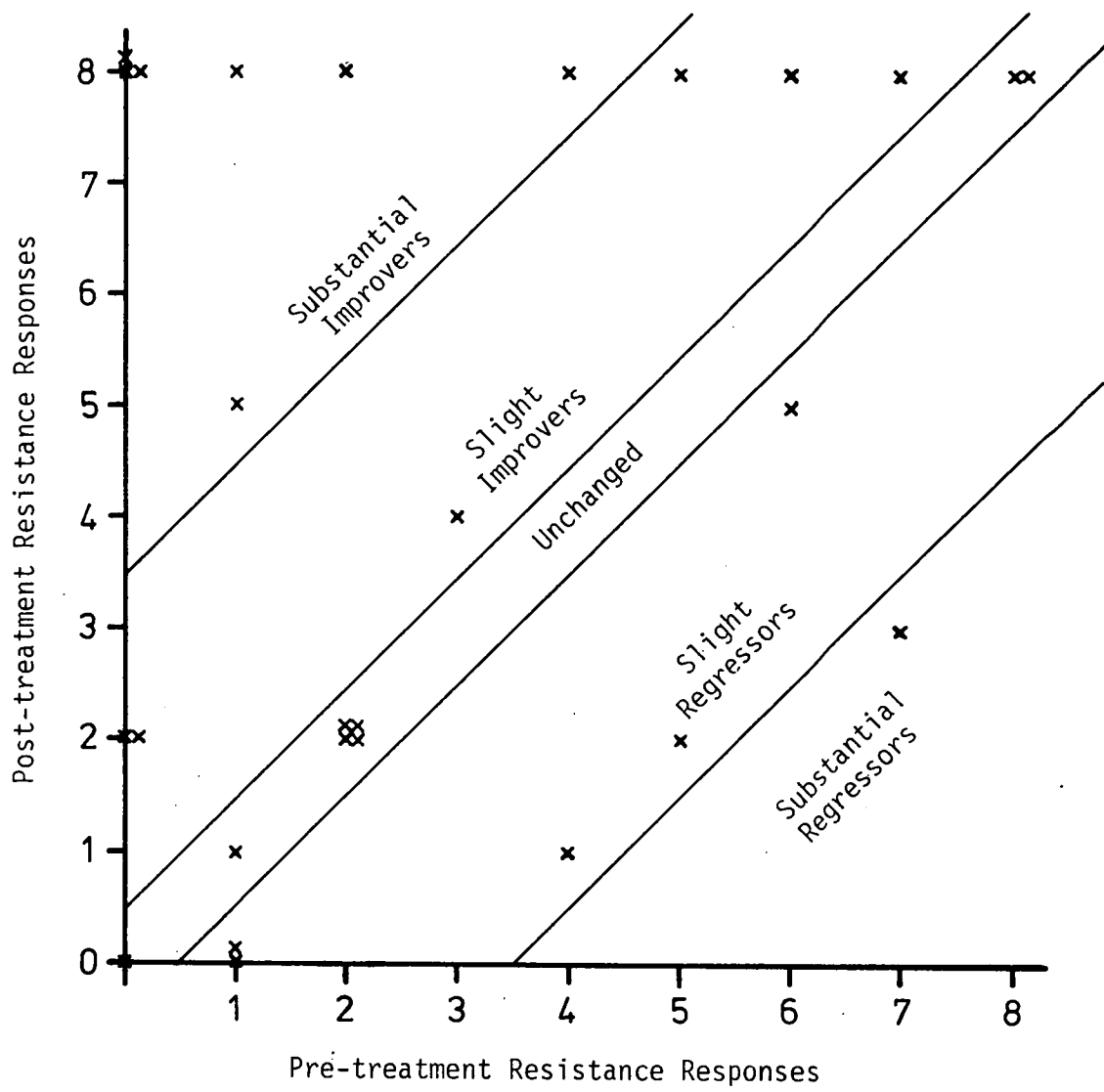


FIGURE 27a Description of Pre- and Post-Treatment Resistance Responses on the 'Did Do' Measure for the DIP Group

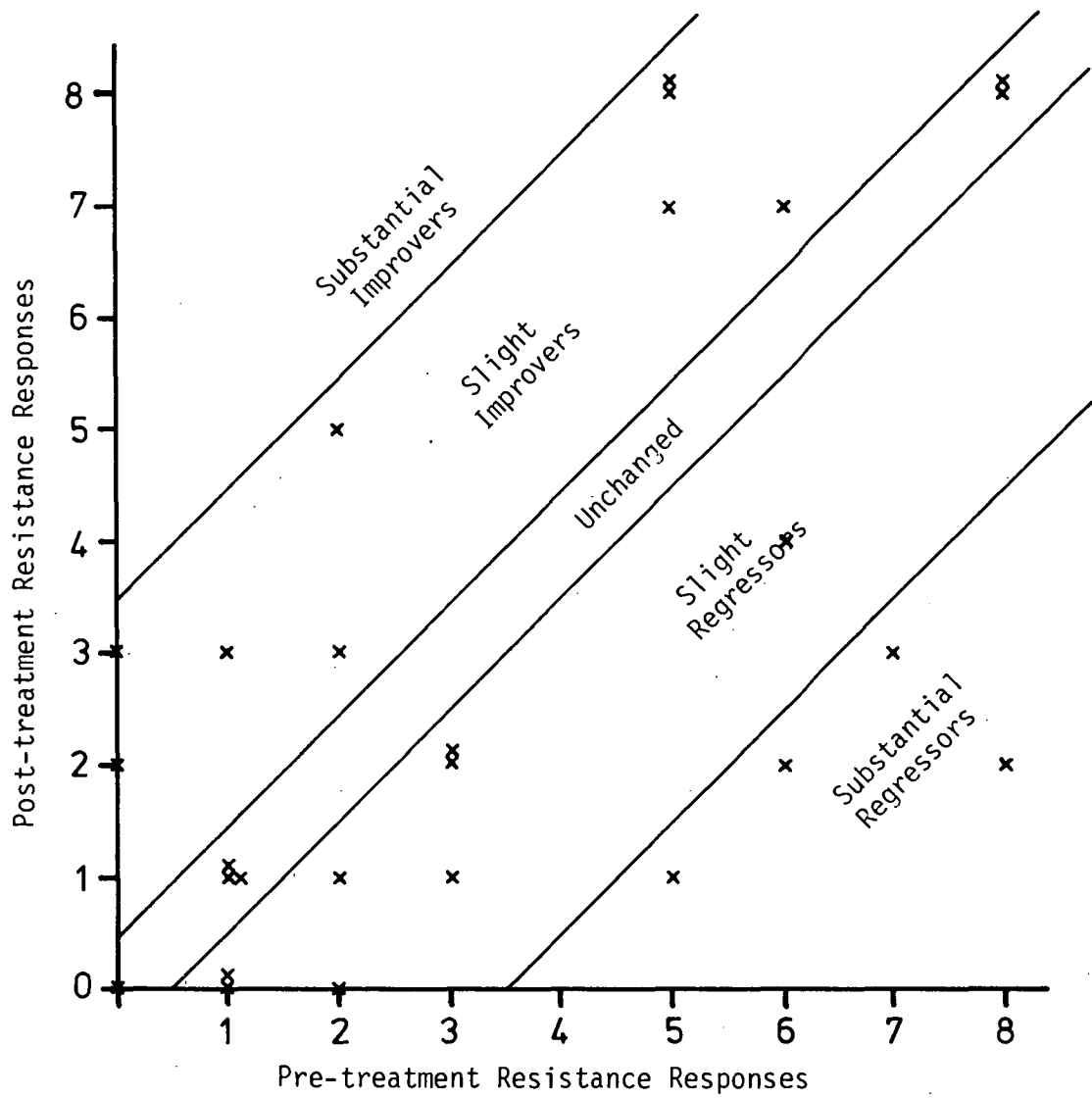


FIGURE 27b Description of Pre- and Post-Treatment Resistance Responses on the 'Did Do' Measure for the GIP Group

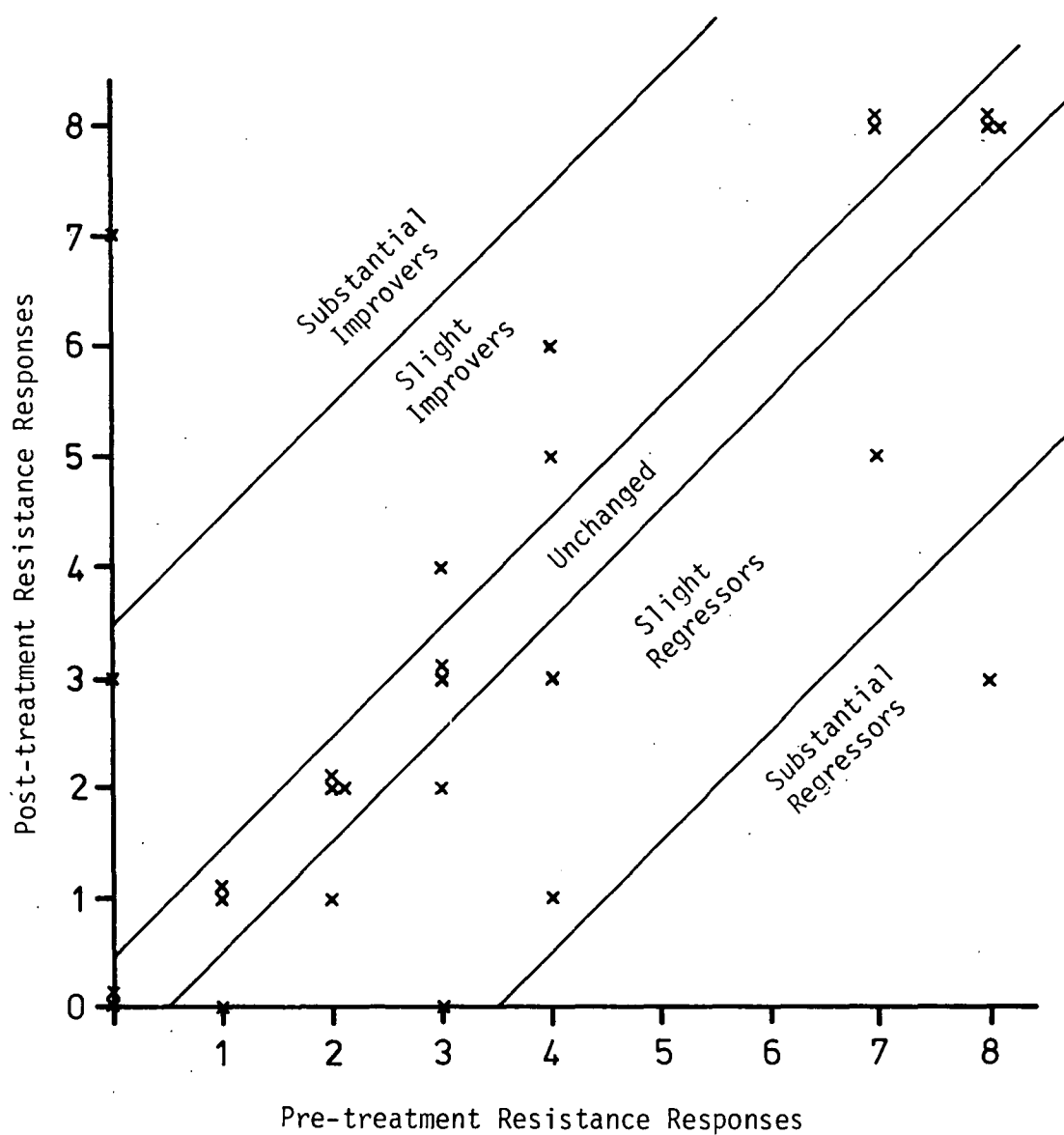


FIGURE 27c Description of Pre- and Post-Treatment Resistance Responses on the 'Did Do' Measure for the No Treatment Control Group

From the table it is clear that across groups most subjects either improved only slightly, were unchanged or regressed (backslid). Only 7 subjects in the DIP and 1 in the no treatment control group improved substantially (+4).

Another point of research interest was the number of subjects who resisted across all situations on the JHTST, that is, were categorical resisters. A graphic representation of categorical resisters in the pre- and post-treatments in the three groups is given in Figure 28.

The figure reveals more children becoming categorical resisters from the pre- to post-treatment in the DIP group compared to the GIP group and no treatment control group.

An analysis of the number of children who became categorical resisters on the post test using a chi square test indicates that there were significantly more DIP compared to GIP and no treatment control subjects ( $\chi^2 = 4.11, 4.11; p < .05$  respectively,  $df = 1$ ). There was no significant difference between the GIP and no treatment control group ( $\chi^2 = 0, p > .05; df = 1$ ). These results supported Hypothesis II(a) and (b).

As an important component of the DIP group's resistance training involved legitimate alternative strategies these data will be presented in Figure 29. It is apparent from Figure 29 that only very few children in the groups, at the pre- and post-treatment used legitimate alternative strategies in resisting the temptation to steal on the JHTST. Although the numbers are too small for meaningful statistical analysis, more children at the post-treatment used legitimate alternative

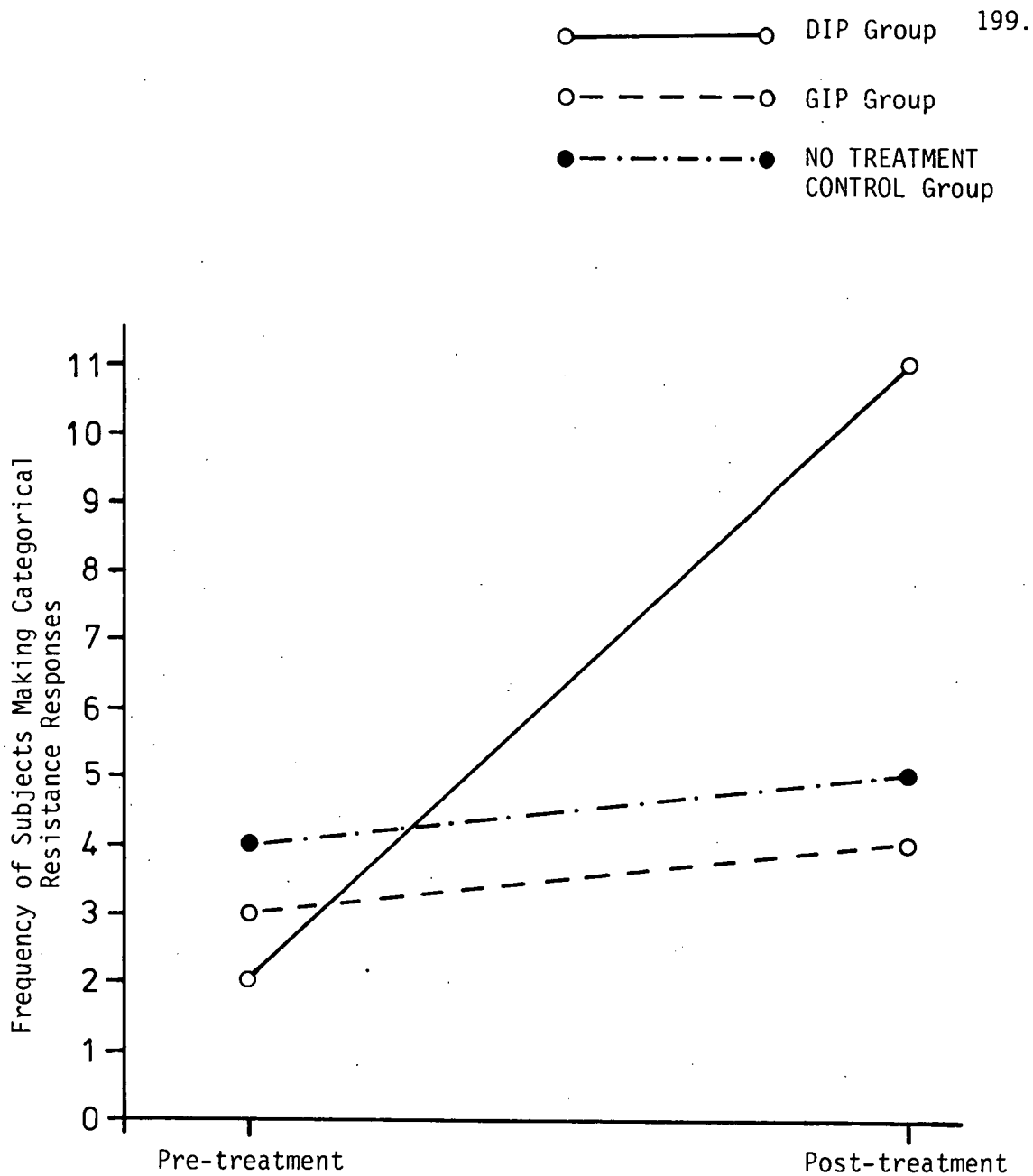


FIGURE 28      Changes in the Number of Categorical  
Resisters After Treatment in the  
3 Groups

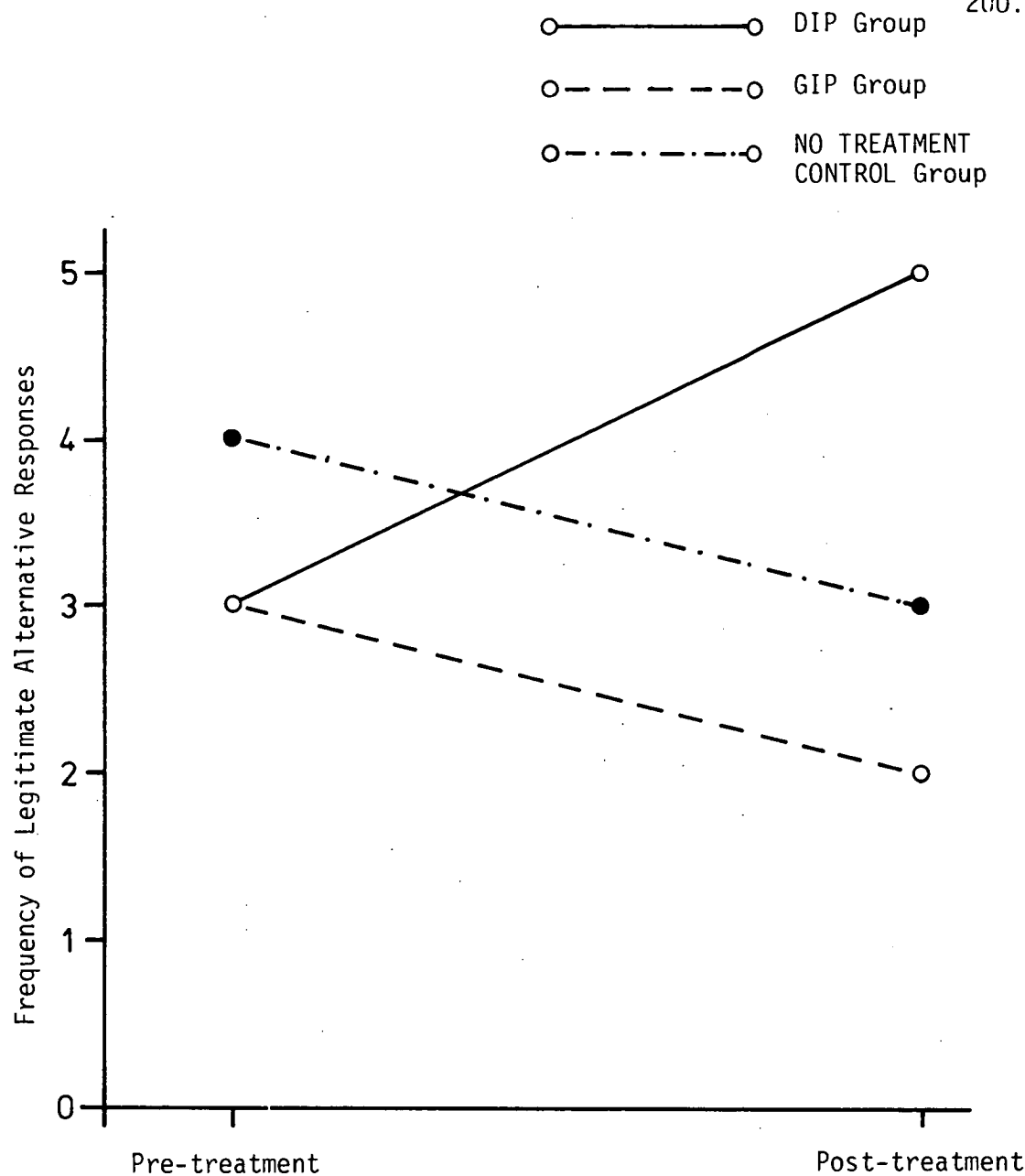


FIGURE 29 Changes in the Number of Legitimate Alternative Responses on the 'Did Do' Measure for the 3 Groups

strategies in the DIP (5) compared to the GIP (2) or no treatment pre-post control (3) groups. Although Hypothesis III (a) and (b) regarding increases in legitimate alternatives were not supported an increase in the predicted direction was noted.

### Intrinsic Resistance Strategies

As the DIP treatment program incorporated training children to use 'intrinsic resistance' cognitive processes in resisting the temptation to steal a comparison was made of the subjects' intrinsic responses in the DIP, GIP and no treatment control groups.

Group mean 'intrinsic resistance' scores at the pre-treatment and post-treatment are shown in Figure 30 for each of the three groups. It is evident from Figure 30 that the DIP group clearly increased their use of intrinsic resistance strategies while those of the GIP group and no treatment control group only increased very slightly.

The data was subjected to the same covariance analysis used for hypothetical behavioural resistance measures with post scores as the criterion measure and pre scores as the covariate. The F ratio is significant at the .05 level, (Appendix IV - L), indicating at least one significant difference exists between the three groups ( $F[2,78 = 3.82, p < .05]$ ). A Duncan's New Multiple Range test applied to the adjusted post test mean revealed that the DIP group was significantly different from the GIP and no treatment control groups ( $p < .05$ ).

○ — — — — — ○ DIP Group 202.  
○ - - - - - ○ GIP Group  
● - . - . - . ● NO TREATMENT  
CONTROL Group

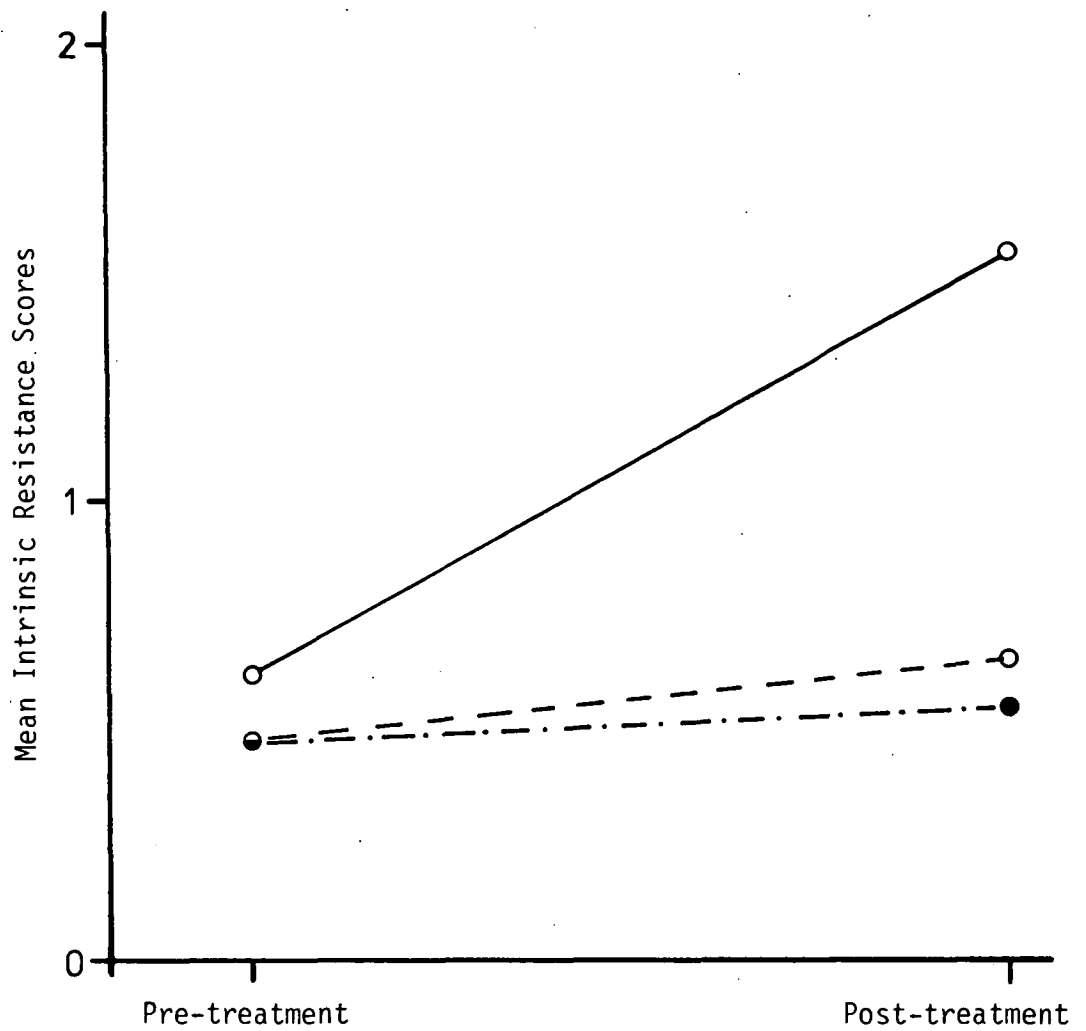


FIGURE 30 Mean Changes in Intrinsic Resistance Scores on the 'Did Do' Measure for the 3 Groups



The GIP group and no treatment control group did not differ significantly from one another ( $p > .05$ ) and therefore Hypothesis IV(a) and (b) was supported.

#### Resistance on the Moral Judgement Measure of the JHTST

Another issue of importance in this research was related to the influence that the treatment program would have on the children's moral judgement in hypothetical temptation to steal situations.

Group mean resistance on the moral judgement ('should do') measure at the pre-treatment and post-treatment are shown in Figure 31 for each of the three groups. From visual inspection of the figure only slight increases occurred in the DIP group and GIP, while there was only slight decrease in the no treatment control group.

The data were subjected to the covariance analysis procedure with the post scores as the criterion measure and the pre scores as the covariate. The analysis indicated no significant difference between the groups ( $F[2,78] = 0.8925$ ,  $p > .05$ )](Appendix IV - M) and supported Hypothesis V(a) and (b).

An analysis was also made of the children's use of legitimate alternative responses on the moral judgement measure. These data are shown in Figure 32. Inspection of the figure shows that approximately the same number of children resisted on the pre- and post-treatment in each of the groups. The number of children resisting at the post-treatment between the

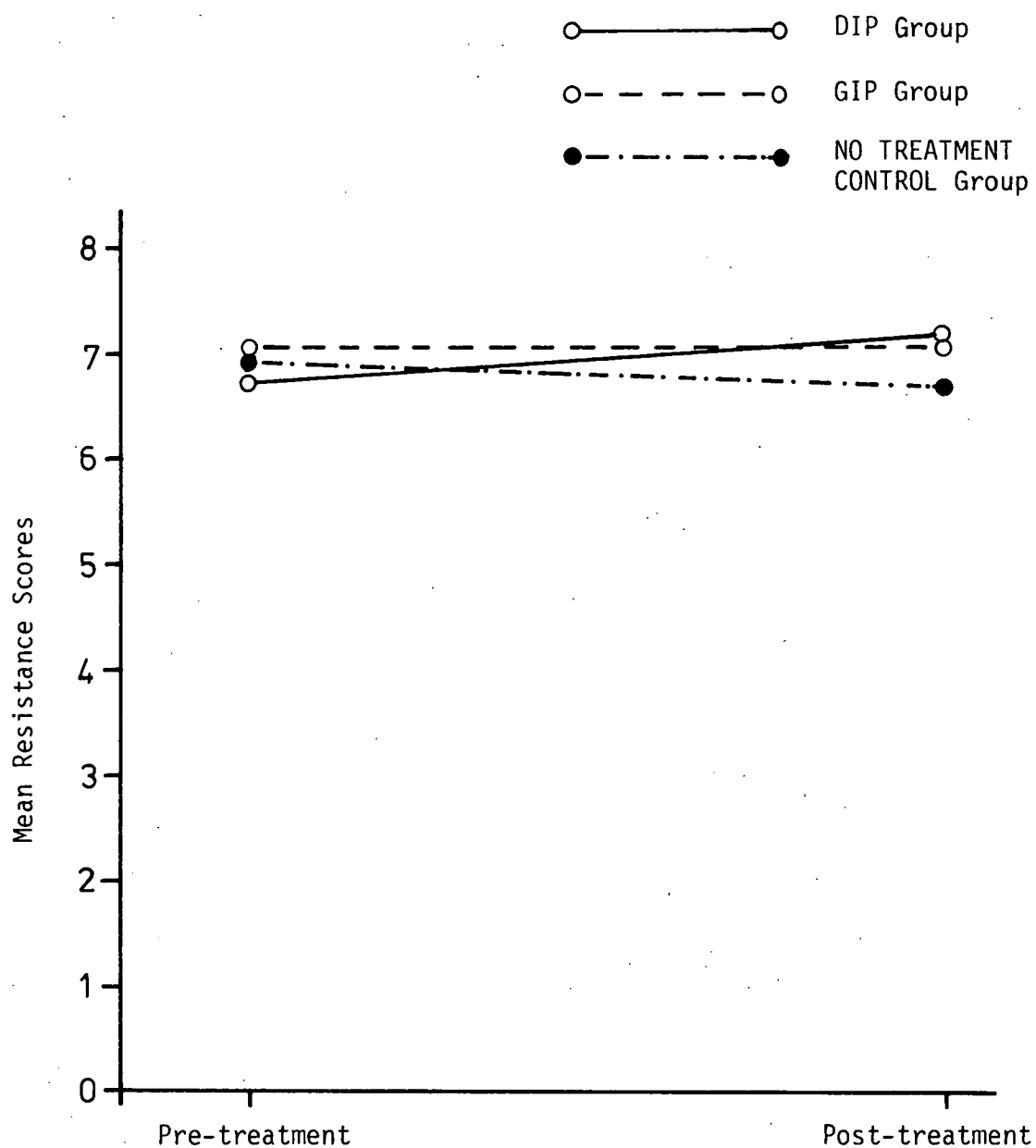


FIGURE 31 Mean Changes in Resistance Scores on the 'Should Do' Measure for the 3 Groups

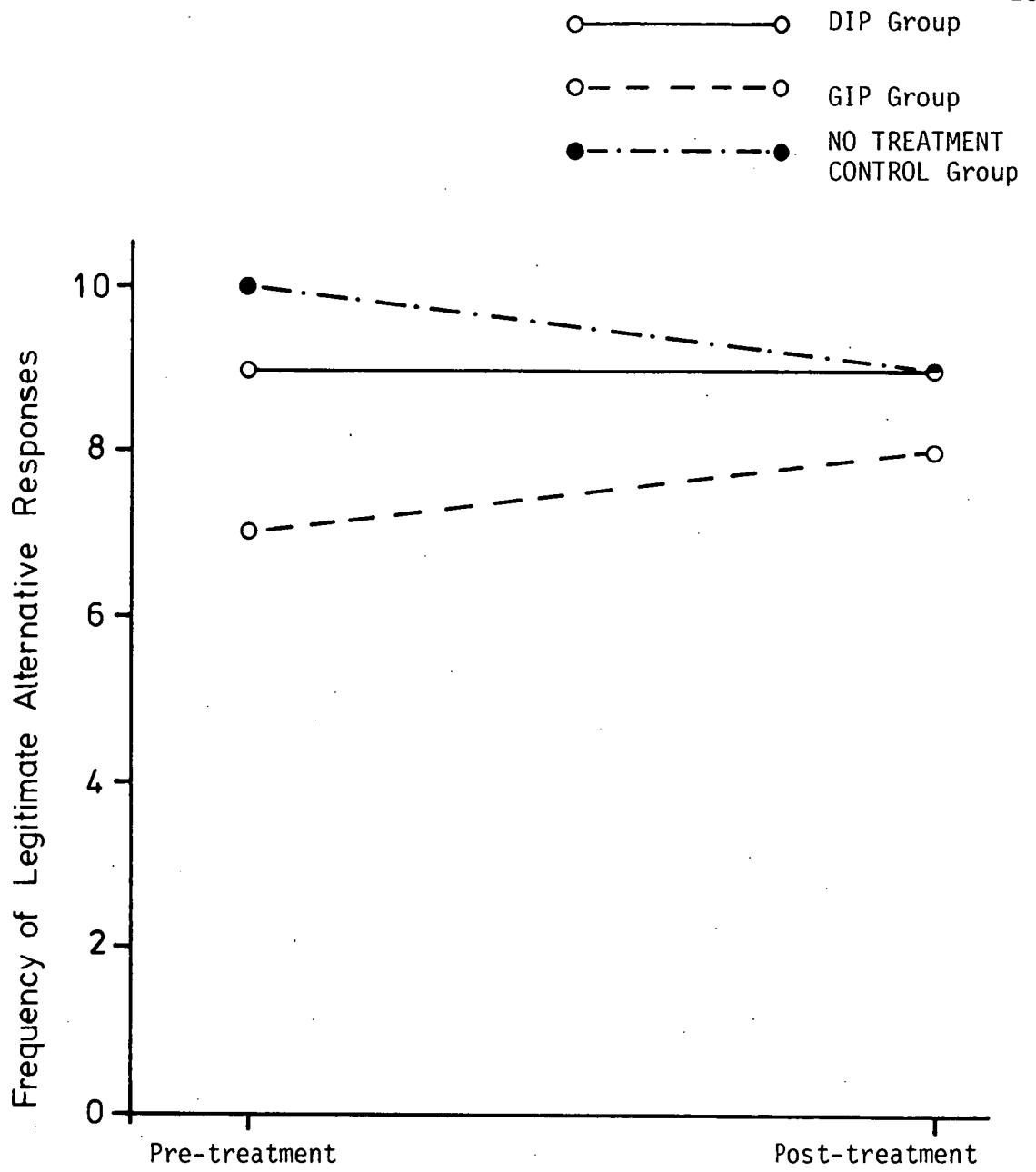


FIGURE 32      Frequency Changes in Legitimate Alternative Responses on the 'Should Do' Measure for the 3 Groups

groups is also approximately equal. This finding fails to support Hypothesis VI(a), but does support Hypothesis VI(b).

An examination was also made of the subjects' resistance on the moral judgement measure which was motivated by intrinsic processes.

Group mean intrinsic resistance scores at the pre-treatment and post-treatment are shown in Figure 33. From the figure the DIP group clearly increased intrinsic resistance scores, while there was only a slight increase in the GIP group and a slight decrease in the no treatment control group.

A covariance analysis was performed on the data with post-scores as the criterion measure and pre-scores as the covariate. The analysis revealed a significant F ratio. (Appendix IV - N) which suggests at least one significant difference exists between the three groups ( $F[2,78] = 2.99$ ,  $p < .05$ ). A Duncan's New Multiple Range test was performed on the adjusted post test means to determine which intergroup differences were significant. The findings indicated that the DIP group was not significantly different from the GIP group ( $p > .05$ ) but was significantly different from the no treatment control group ( $p < .05$ ), while there was no significant difference between the GIP group and no treatment control group ( $p > .05$ ).

Therefore that part of Hypothesis VII(a) which referred to a significant difference between the DIP group and GIP group was not confirmed, while that part of the hypothesis which suggested a significant difference between the DIP group and no

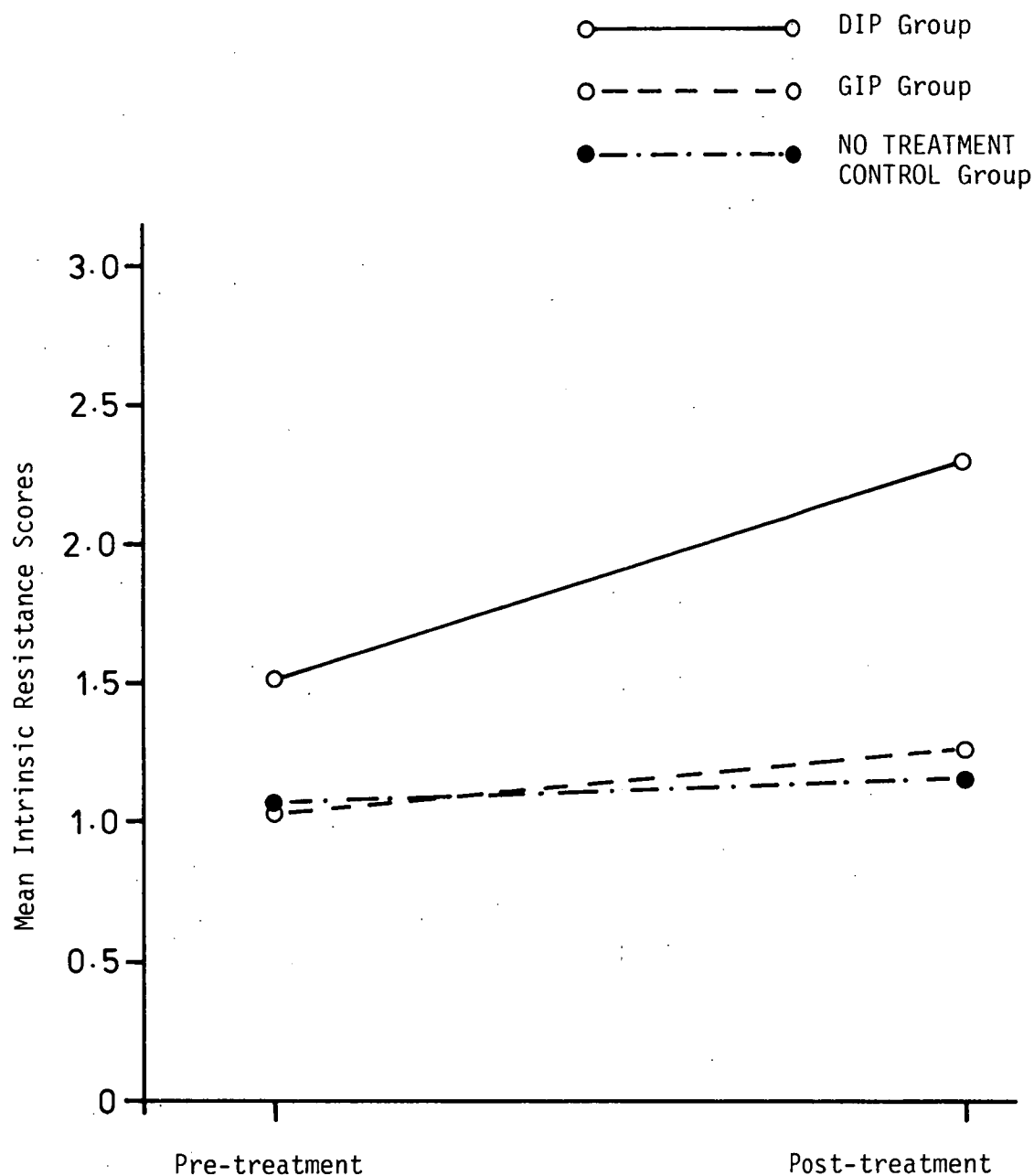


FIGURE 33

Mean Changes in Intrinsic Resistance Scores on the 'Should Do' Measure for the 3 Groups

treatment control group was confirmed. Hypothesis VII(b) was also confirmed.

#### Stephens' General Moral Judgement Measure

In order to determine whether the effects of a specific (DIP) and general (GIP) stealing program would spread to children's wider moral judgement reasoning, two moral judgement tests were administered. These tests will be examined separately.

(a) Clumsiness and Stealing Test. The Clumsiness and Stealing test examined whether the child made a response based on a consequence of the action, or the intentions of the actor.

Group mean clumsiness and stealing scores at the pre-treatment and post-treatment are shown in Figure 34 for each of the three groups. The figure suggests no substantial increases in any of the groups.

An analysis of covariance was performed on the pre-treatment and post-treatment measures with the pre-treatment scores used as the covariate. The findings indicated no significant difference between the groups ( $F[2,78] = 0.50$ ,  $p > .05$ )(Appendix IV - 0). Therefore Hypothesis VIII(a) and (b) were confirmed with respect to the clumsiness and stealing index of general moral judgement.

(b) Collective Responsibility Test. The collective responsibility test analyzed whether the subjects would punish everyone without reason for one actor's misdemeanour,

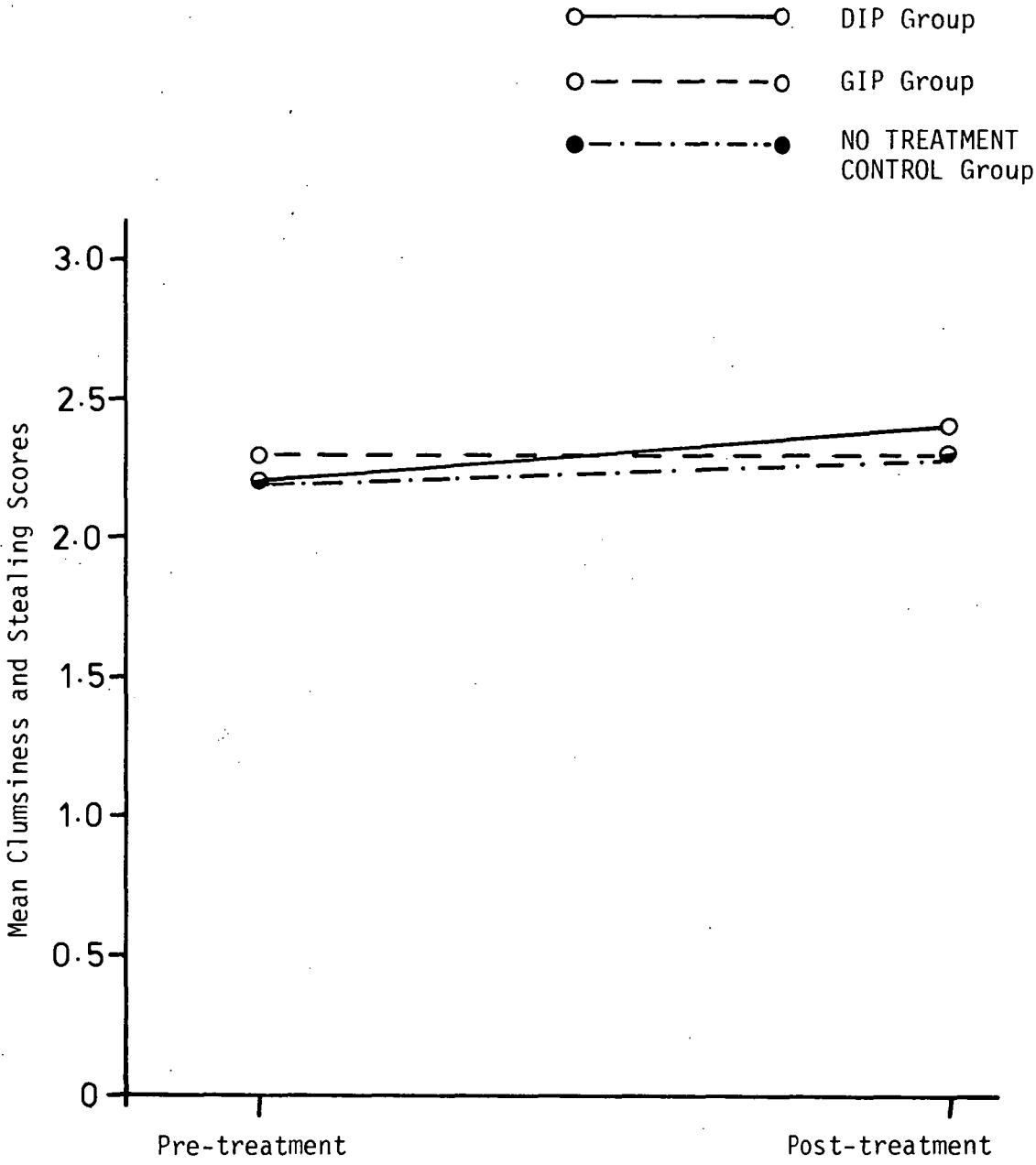


FIGURE 34 Mean Changes in Clumsiness and Stealing Scores for the 3 Groups

or would only punish the perpetrator of the act with a clear reason.

Group mean collective responsibility scores at the pre-treatment and post-treatment are shown in Figure 35. It is clear from the figure that a relatively small increase occurred in the GIP, and there was almost no change in the DIP and no treatment control groups.

An analysis of covariance performed on the pre- and post-treatment measures with the pre-treatment scores as covariate indicated a significant F ratio (Appendix IV - P)( $F[2,78] = 3.38$ ,  $p < .05$ ]). Accordingly, a Duncan's New Multiple Range test was conducted. The results indicated no significant difference between the DIP group and both the no treatment control group and the GIP group. However, the GIP group was significantly different from the no treatment control group ( $p < .05$ ). Hypothesis IX referring to no significant difference between the DIP group to GIP group and DIP group to no treatment control group was confirmed. While that part of the hypothesis referring to no significance between the GIP group and no treatment control group was not confirmed.

#### Reflectivity Scores on Kagan's MFFT

An important aspect of the DIP training was to encourage children to reflect or 'think' before acting.

As mentioned, recently Salking and Wright (1977), working with Kagan's MFFT presented a model conceptualizing reflection-impulsivity as two orthogonal dimensions, one being a measure



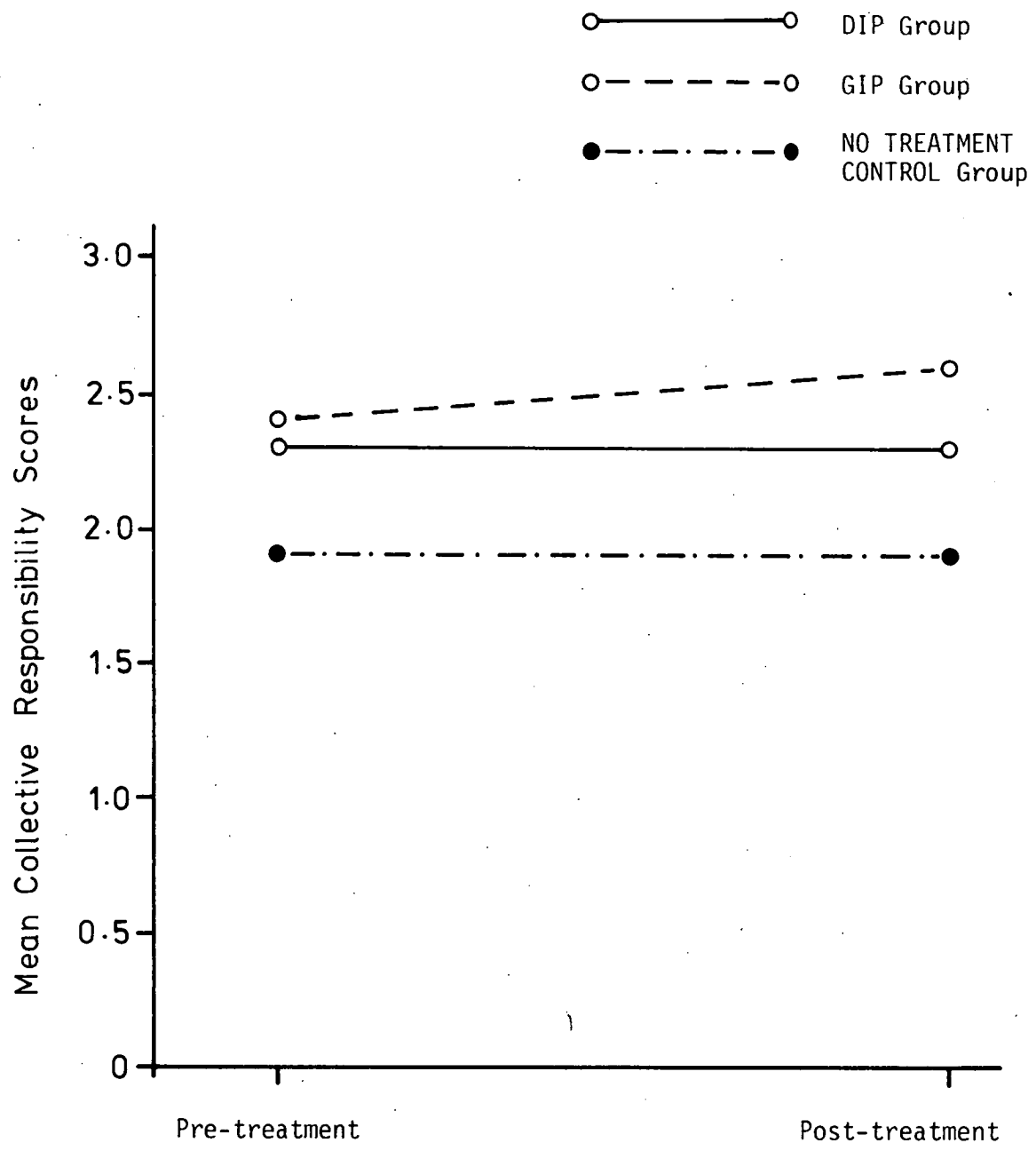


FIGURE 35 Mean Changes in Collective Responsibility Scores for the 3 Groups

of impulsivity, and the other, efficiency. These measures will be treated separately.

(a) MFFT - Impulsivity Measure. Group mean impulsivity scores at the pre-treatment and post-treatment are shown in Figure 36. From the figure it is clear that the DIP group has increased in reflectivity, that is, decreased in impulsivity, while both the GIP group and no treatment control group have increased in impulsivity.

An analysis of covariance was performed on the pre- and post-treatment measures, using the pre-treatment scores as the covariate and the post scores as the criterion measure. The analysis revealed a significant F ratio (Appendix IV - Q) ( $F[2,78] = 3.89, p < .05$ ). A Duncan's New Multiple Range test was performed on the adjusted post test mean indicating that the DIP group is significantly different from the GIP group and the no treatment control group ( $p < .05$ ), while there was no difference between the GIP group and no treatment control group ( $p > .05$ ). These findings supported Hypothesis X(a) and (b).

(b) MFFT - Efficiency Measure. Group mean efficiency scores at the pre- and post-treatment are shown in Figure 37. From the figure it is clear that the DIP group slightly increased.

An analysis of covariance, similar to those previously reported, was performed on the data. There was no significant difference between the groups ( $F[2,78] = .49, p > .05$ ) (Appendix IV - R). Hypothesis XI(a) and (b) were therefore confirmed.

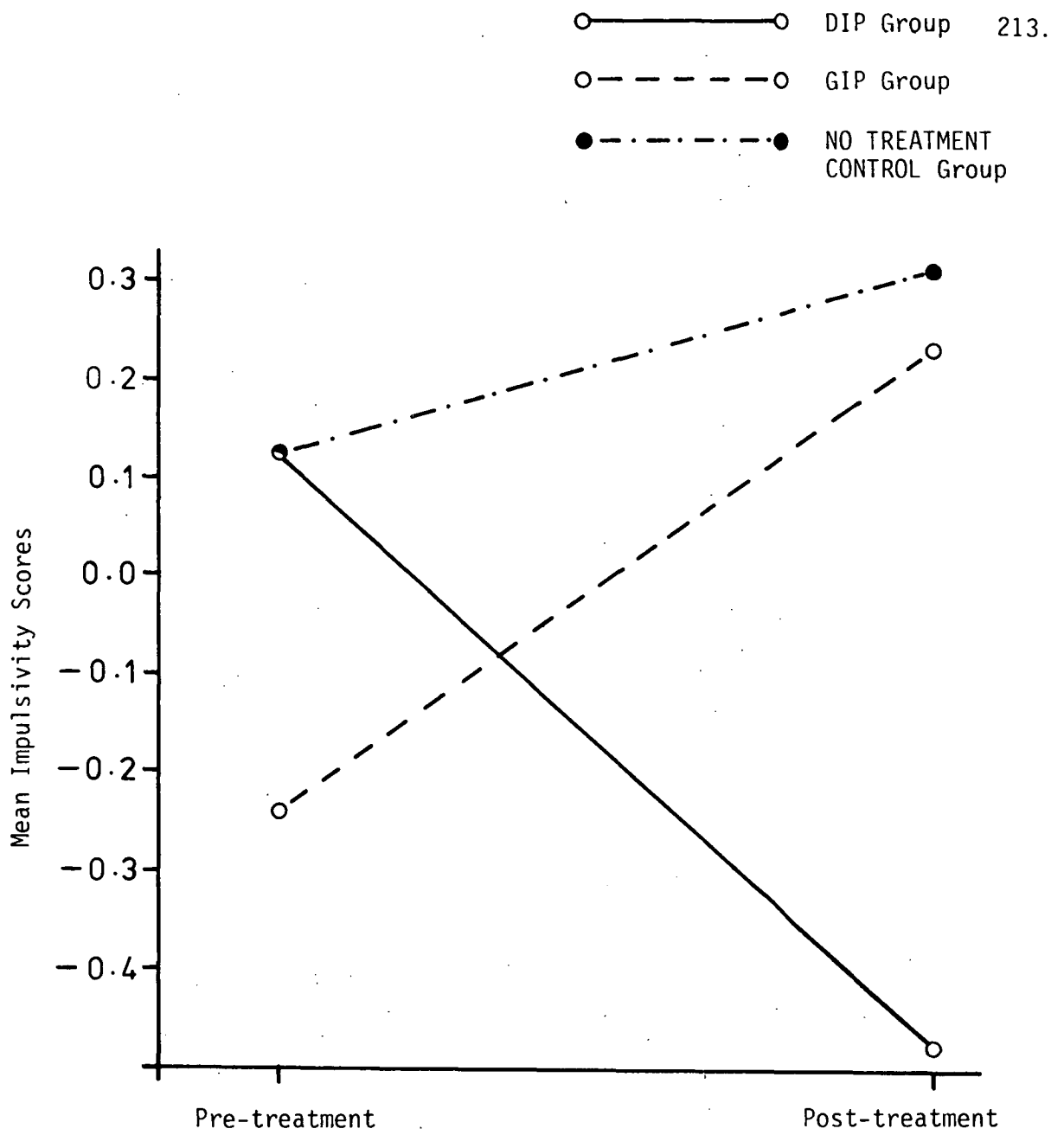


FIGURE 36 Mean Changes in Impulsivity Scores  
for the 3 Groups

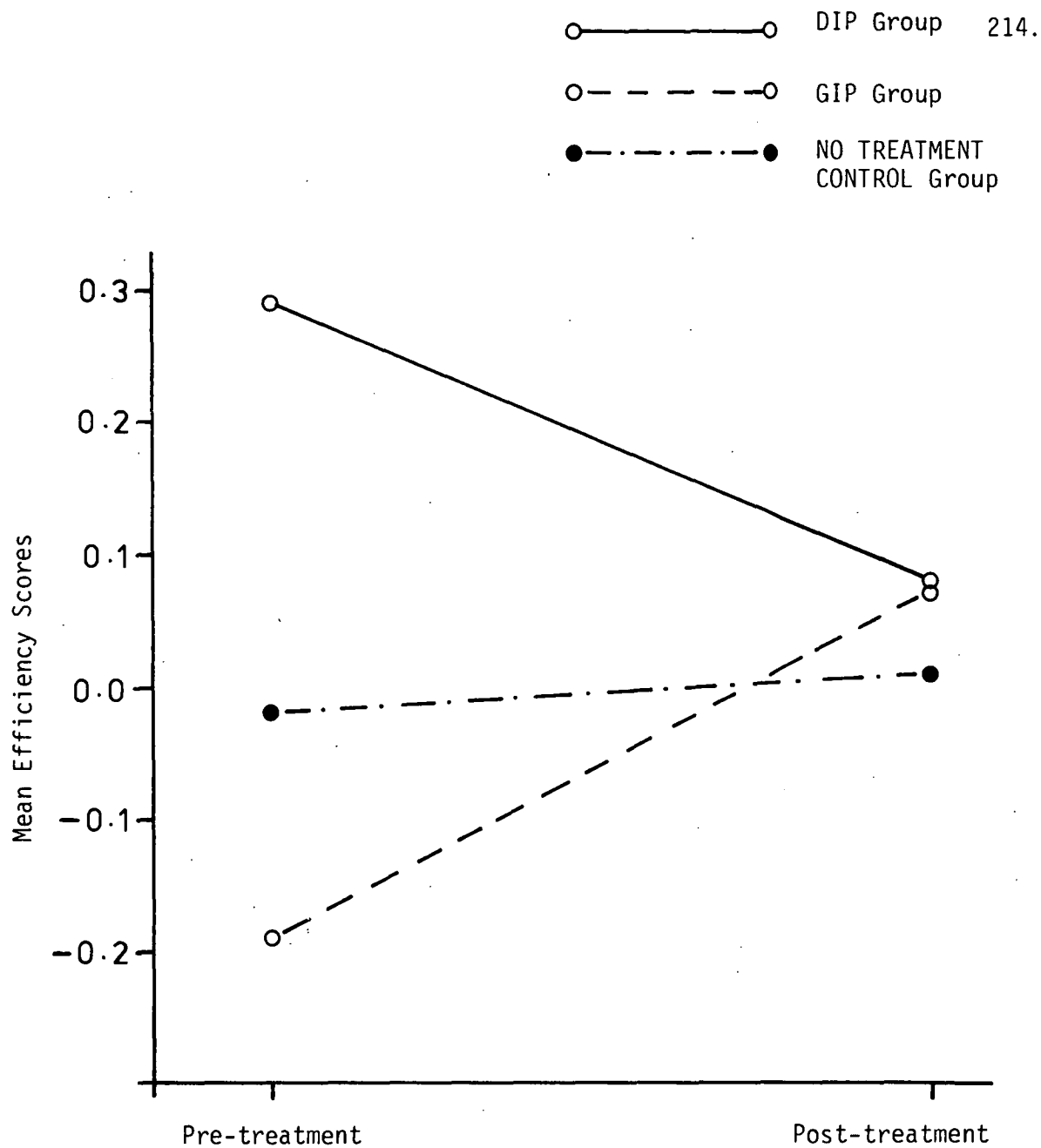


FIGURE 37 Mean Changes in Efficiency Scores for the 3 Groups

### Real-Life Temptation Situations

In order to examine the efficacy of the treatment procedures in a real life temptation to steal situation the children were confronted with such a situation. Also to obtain an index of the generalisability of the treatment procedures from a stealing to cheating domain a temptation to cheat situation was presented to the children. The results of the stealing and cheating tests will be presented separately.

(a) The Real-Life Temptation to Steal Test. A graphic presentation of real life stealers in the pre- and post-treatments in the three groups is given in Figure 38. It is apparent from the figure that there has not been a substantial reduction in the number of children stealing from pre- to post-test in the three groups. A comparison of children's stealing at the post test level between the DIP to GIP and no treatment control groups also reveals no significant differences ( $\chi^2 = 1.3, 0, p > .05$  respectively;  $df = 1$ ). There was also no difference between the DIP to GIP and no treatment control group ( $\chi^2 = .66, p > .05, df = 1$ ). Hypothesis XII(a) was thus not supported, while Hypothesis XII(b) was confirmed. Furthermore, a comparison of the no treatment control group to the post only control group demonstrates no significant differences ( $\chi^2 = 0, p > .05, df = 1$ ). This finding suggests that test sensitization per se, does not produce a reduction of stealing in this situation and supported Hypothesis XII(c).

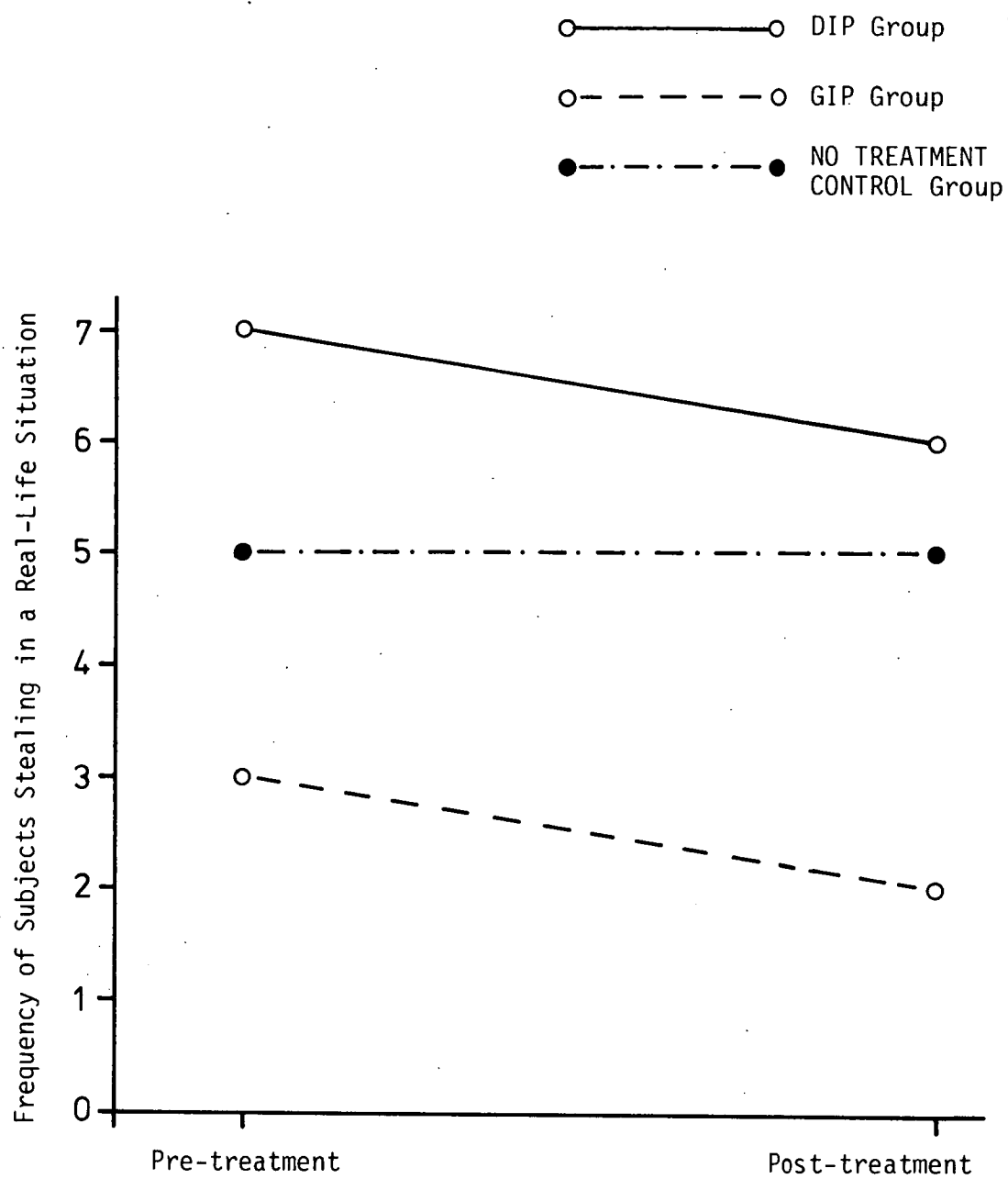


FIGURE 38      Frequency Changes in Real-Life Stealing Responses for the 3 Groups

(b) The Real Life Temptation to Cheat Test. The results of children's responses to the cheating test are shown in Figure 39. From the figure no strong important trends are obvious from pre- to post-treatment in the three groups. An analysis of cheating behaviour at post-treatment between the DIP to GIP and no treatment control groups suggests no significant differences ( $\chi^2 = .68, .07, p > .05$  respectively,  $df = 1$ ). Nor was there a significant difference between the GIP and no treatment control group ( $\chi^2 = .01, p > .05, df = 1$ ). Hypothesis XII(a) was therefore not confirmed, while Hypothesis XII(b) was supported. Also an examination of the behaviour of the children in the no treatment control group to the post only control group showed no significant difference ( $\chi^2 = 0, p > .05, df = 1$ ). Again no substantial test sensitization effect exists. This result supported Hypothesis XIII(c).

#### Follow-Up Results on the DIP

As it was hypothesised that there would be a significant increase in resistance on the JHTST in the DIP group, but not in the GIP group or no treatment control group, a follow-up test was presented only to the DIP group to establish whether gains made during treatment were maintained. At the time of the follow-up study, three months later, only 23 subjects remained available for testing.

Group mean resistance responses on the behavioural and moral judgement measures at the post-treatment and follow-up treatment are shown in Figure 40 for the DIP group. A related

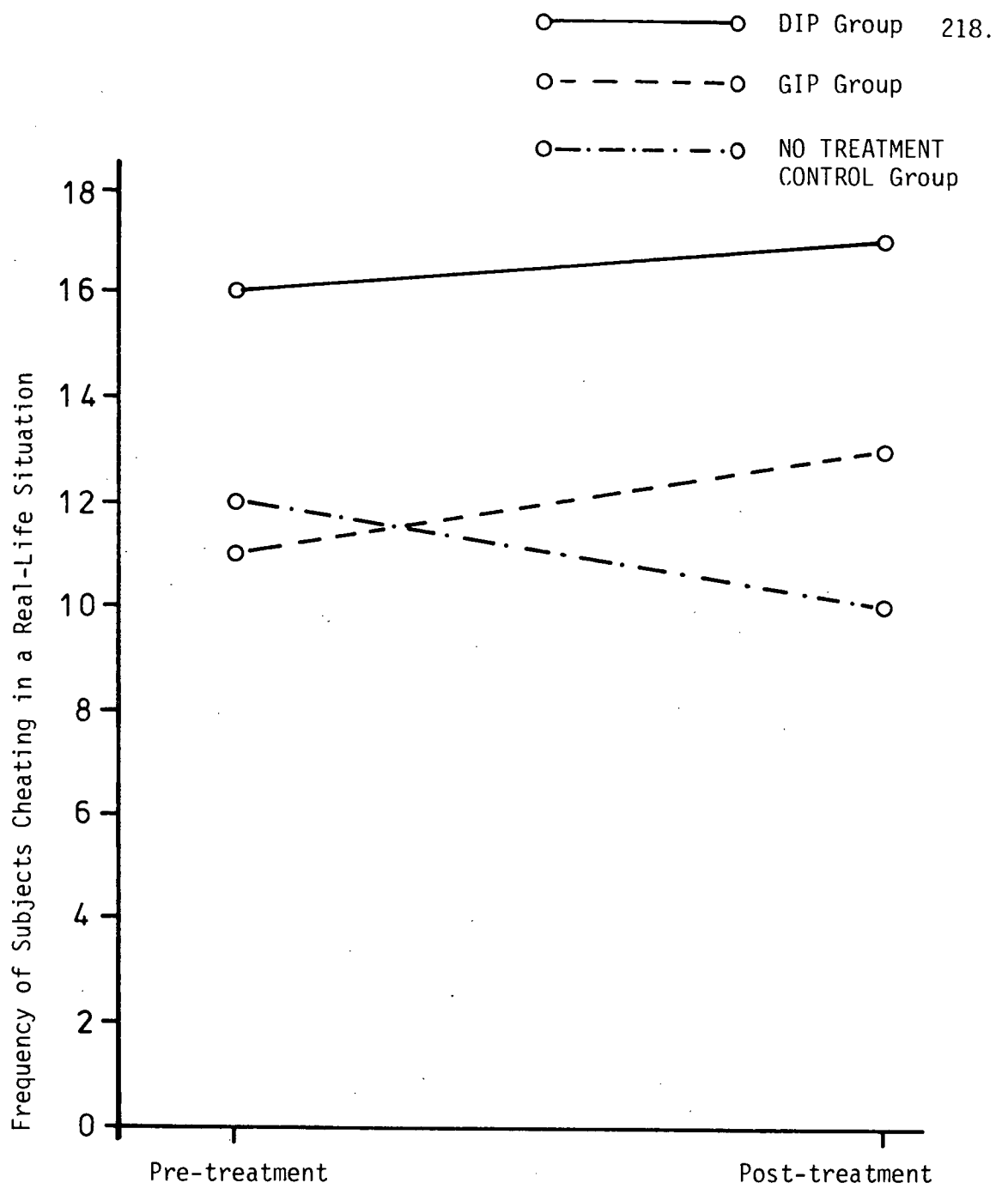


FIGURE 39 Frequency Changes in Real-Life Cheating Responses for the 3 Groups



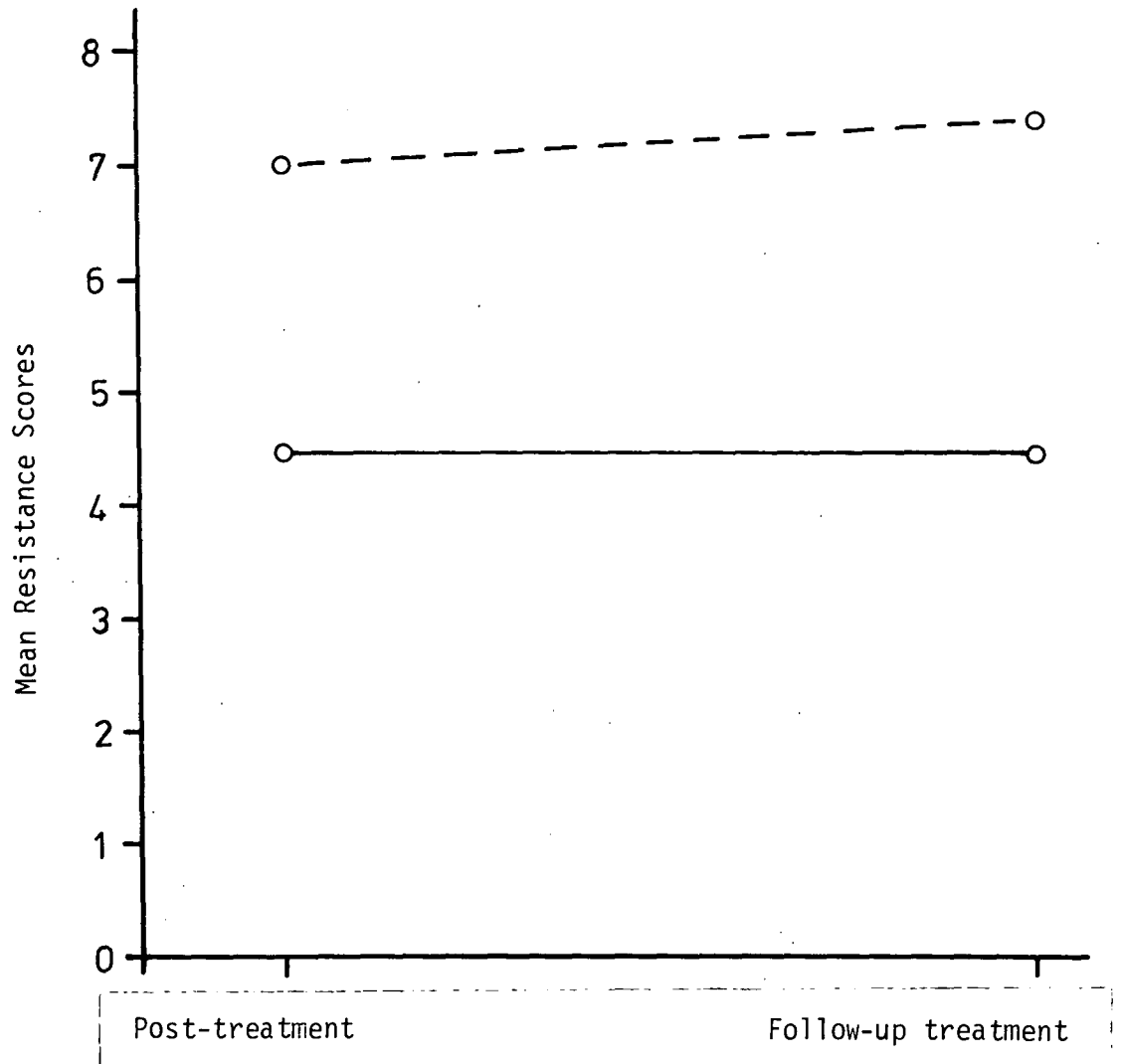


FIGURE 40 Mean Changes in Resistance Scores on the 'Did Do' and 'Should Do' Measures for the DIP Group

t test indicated no significant difference between the post and follow-up means on the behavioural measure (means were 4.43 and 4.4 respectively)(related  $t = 0.1$ ,  $p > .05$ ,  $df = 22$ ). These results show that the group gains were maintained on the behavioural measure. Hypothesis XIV(a) was thus confirmed. Resistance on the moral judgement measure revealed a significant increase between the post to follow-up treatment (means 7.0 and 7.4 respectively)(related  $t = 2.18$ ,  $p < .05$ ,  $df = 22$ ). Hypothesis XIV(b) was not supported. These results indicated an improvement from the post-treatment in the children's moral judgement in hypothetical temptation to steal situations.

It was also of concern to establish whether the mean increase in intrinsic resistance processing on the behavioural measure from pre- to post-treatment in the DIP group would be maintained at the time of follow-up treatment.

Group mean intrinsic resistance means at the post-treatment and follow-up treatment are indicated in Figure 41. Analysis of these means indicated no significant difference between the post and follow-up treatment mean scores (means were 1.44 and 1.44 respectively)(related  $t = 0$ ,  $p > .05$ ,  $df = 22$ ). These findings supported Hypothesis XV(a). It was also found that there was no significant difference between intrinsic resistance on the moral judgement measure from the post-treatment to follow-up treatment (means were 2.22 and 1.87 respectively)(related  $t = 1.09$ ,  $p > .05$ ,  $df = 22$ ). This result supported Hypothesis XV(b).

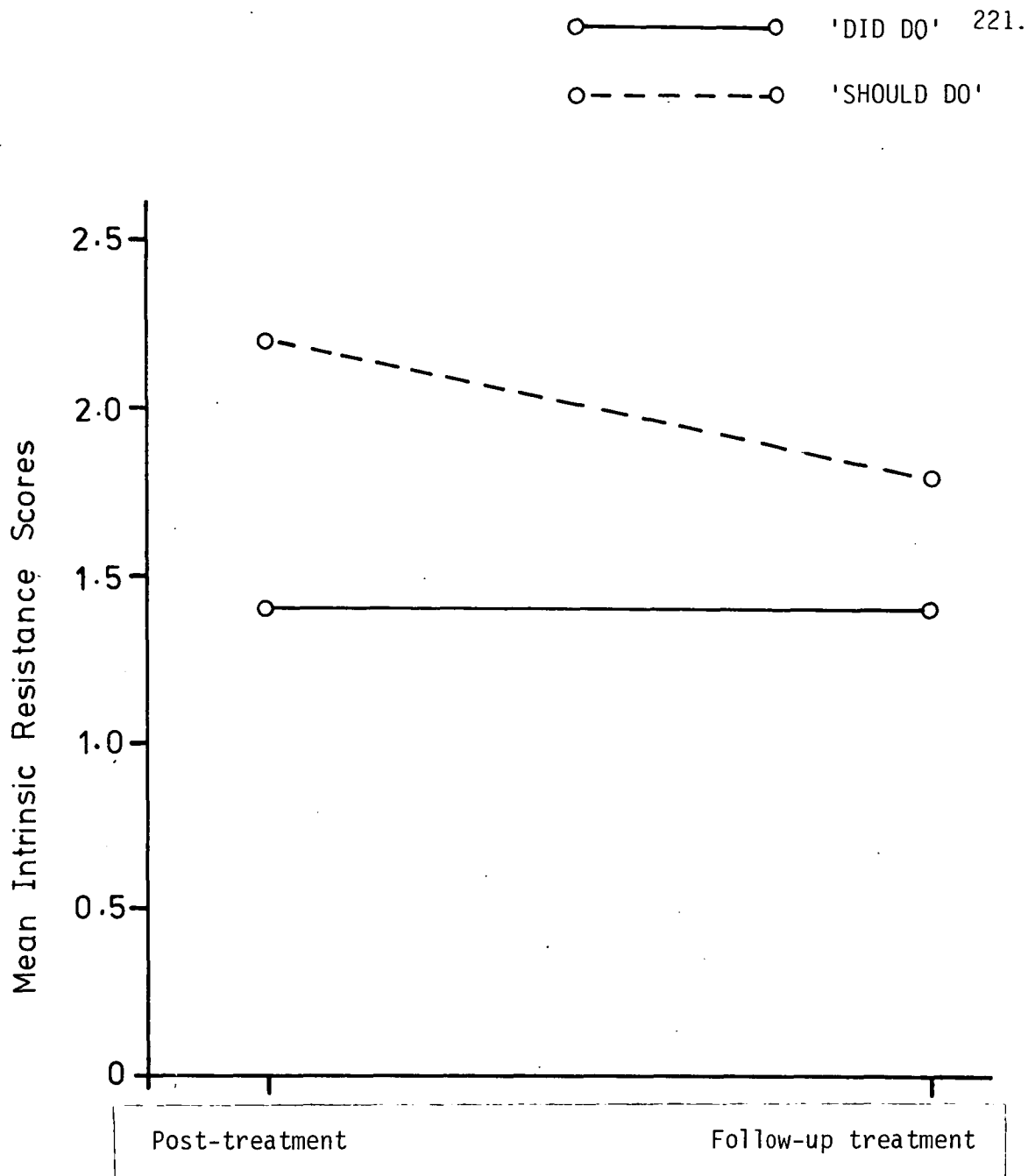


FIGURE 41 Mean Changes in Intrinsic Resistance Scores on the 'Did Do' and 'Should Do' Measures for the DIP Group

## 11.2 SUMMARY OF THE FINDINGS

Results will be evaluated with respect to the hypotheses outlined previously.

I(a) & (b) There was a significant increase in behavioural resistance in the DIP group relative to either the GIP and no treatment control groups. There was no significant difference between the GIP and no treatment control groups.

However, it should be noted that the number of substantial improvers (4+) in the DIP group consisted of only approximately 25 percent of the group.

I(c) No significant difference existed in the post resistance scores on the behavioural measure between the no treatment control group and the post only control group.

II(a) & (b) An analysis of the children who became categorical resisters indicated a significant difference in favour of the DIP relative to the GIP and no treatment control groups, while there was no significant difference between the GIP and no treatment control groups.

III(a) & (b) No significant increase in legitimate alternative responses on the behavioural measure was found in the DIP group in comparison with the GIP and no treatment control groups, nor was there a significant increase in the GIP relative to the no treatment control group.

IV(a) & (b) A significant increase in the use of intrinsic behavioural resistance strategies occurred in the DIP when related to the GIP or no treatment control groups, whilst there was no significant difference between the GIP and the no treatment control groups.

V(a) & (b) No significant increase in resistance on the moral judgement measure was found in the DIP relative to the GIP and no treatment control groups, nor was there a significant increase in the GIP group compared to the no treatment control group.

VI(a) & (b) No significant increase in the number of children using legitimate alternative responses on the moral judgement measure occurred in the DIP relative to the GIP and no treatment control groups. No significant differences existed between the GIP and no treatment control groups.

VII(a) & (b) No significant increase in intrinsic resistance on the moral judgement measure was found in the DIP compared to the GIP group. However, there was a significant difference between the DIP and no treatment control groups, while there was not between the GIP and no treatment control groups.

VIII No significant increase in general moral judgement on the clumsiness and stealing test was found in the DIP relative to the GIP and no treatment control groups, or between the GIP and no treatment control groups.

IX No significant increase in general moral judgement on the responsibility test was found in the DIP relative to the

GIP and no treatment control groups. However, the GIP was significantly different from the no treatment control group.

X(a) & (b) A significant difference in impulsivity on the MFFT was found in the DIP relative to the GIP and no treatment control groups, while there was no significant difference between the GIP and no treatment control groups.

XI No significant increase in efficiency on the MFFT was found in the DIP relative to the GIP and no treatment control groups. There was also no significant difference between the GIP and no treatment control groups.

XII(a)(b) & (c) No significant decrease in the number of children stealing in the real life situation occurred in the DIP relative to the GIP and no treatment control groups, while there was no significant difference between the GIP and no treatment control groups, or between the no treatment control and post only control groups.

XIII(a)(b) & (c) No significant decrease in the number of children cheating in the real life situation occurred in the DIP in comparison with the GIP and no treatment control groups. There was no significant difference between the GIP and no treatment control groups, or between the no treatment control and post only control groups.

XIV(a) No significant difference resulted in a comparison between resistance on the behavioural measure in the DIP post-treatment relative to the DIP follow-up treatment.

XIV(b)            A significant increase occurred in resistance on the moral judgement measure in the DIP follow-up treatment relative to the DIP post-treatment.

XV(a) & (b)    No significant difference occurred in a comparison between intrinsic resistance on the DIP post-treatment relative to the follow-up treatment on either the 'did do' or 'should do' measures.

## CHAPTER 12

## DISCUSSION

## 12.1 INTERPRETATION OF FINDINGS

The interpretation of the findings in the foregoing results section will consist of a discussion of the experimental and control groups' performance on

- (i) the hypothetical temptation to steal measure
- (ii) real life temptation measures
- (iii) the general moral judgement measures, and
- (iv) the impulsivity and efficiency measures.

(i) The Hypothetical Temptation to Steal Measure: JHTST

The findings on the behavioural measure of the JHTST indicated a significant mean increase in resistance scores in the DIP group compared to the GIP and no treatment control groups, however there was no significant difference between the GIP and no treatment control groups. The design of the study included a post only control group in order to assess whether repeated exposure to the JHTST, per se, improved performance. A comparison of the no treatment and post only groups indicated no significant differences. Therefore no significant test sensitization effects were apparent.

The significant mean difference finding between the treatment groups on the 'did do' measure would suggest a greater efficacy for the DIP group compared to the GIP group in facilitating educable mentally retarded children's resistance to the temptation to steal in a series of hypothetical



situations. In addition, this result clearly established that children in the DIP group were able, at least to some extent, to learn, retain and operate on resistance to stealing information which required them to engage in a high level of cognitive activity.

However, further inspection of the pre- and post-treatment raw data suggested that only approximately 25 percent of the children in the DIP group could be labelled substantial improvers (4+). Also over half of the group (52%) either regressed or were unchanged, while the remainder (23%) were slight improvers (1 to 3). The substantial improvers did not differ markedly from other group members in terms of I.Q., age, SES or sex. Other variables, such as attentional and motivational variables may have accounted for the better performance of the substantial improvers.

In attempting to explain why many children did not increase their resistance responding, several possible reasons emerge. Firstly, although the children had demonstrated that they could verbalise the resistance processes in the DIP with verbal prompts, they were provided with visual cues throughout the program. It may be that a proportion of the educable mentally retarded children could not employ the resistance processes indicated in the DIP at the time of post-treatment because they could not recall these processes without visual cues provided in the program. Secondly, a number of the children may have acquired the resistance chain used in the

DIP but not have been able to generalize their learning from the training to the testing situation. Thirdly, a small proportion of children were categorical resisters or close to the resistance ceiling on the JHTST at the time of pre-treatment.

These considerations may constitute the basis for future improvements in the DIP.

An analysis of the GIP and no treatment groups indicated no significant differences between the groups.

However, inspection of the pre- and post-treatment raw data revealed that approximately half (45%) of the GIP group regressed compared to about one third (33%) of the no treatment control group. This greater regression in the GIP group requires some further comment. It is suggested that although the GIP involved the children in the discussion of issues and aspects of stealing, per se, it did not provide definitive moral answers. In this sense the program lacked a structural and instructional dimension. That is, the children were not formally taught whether stealing was right or wrong. It was an inbuilt assumption of the GIP procedure that the children would discover for themselves the correct moral pathway. Clearly, with many educable mentally retarded children this proved to be an unwarranted assumption.

One component of particular importance in the DIP procedure was aimed at helping children generate a legitimate alternative response to stealing. A comparison of the experimental

and control groups on the legitimate alternative index of the behavioural measure on the JHTST indicated no significant differences between the groups. The failure of the DIP group to achieve significance over the GIP and no treatment control groups on the legitimate alternative index may have been due to the inability of the retarded children to make the required level two resistance response outlined in the program. It could be argued that the retarded child, unlike the normal child in the Haines, Jackson and Davidson (1980) study, considered he had successfully responded to a temptation situation when he had made a terminal resistance response. He may not have considered it necessary after saying s/he would resist that he needed to generate a legitimate alternative. Further research seems necessary in this area.

Another comparison between the experimental and control groups which involved an analysis of those children who became categorical resisters demonstrated that the DIP group was significantly different from the GIP and no treatment control groups, while there was no significant difference between the GIP and no treatment control groups. Categorical resistance on the JHTST represents a disposition towards honesty in hypothetical temptation to steal situations, and has been shown to be related to real life resistance to stealing with normals (Haines, Jackson and Davidson, 1980), and to some extent with educable mentally retarded children (see Study I). Therefore as a greater number of children became categorical resisters in the DIP group these data lend further

support to the view that a DIP program is superior to a GIP one.

This finding implies that more children in the DIP group than in the GIP group shifted from being categorical yielders or resisters in only some of the eight situations to the point where they demonstrated a cognitive and behavioural consistency in resisting across situations irrespective of the nature of the situation. In general, this outcome lends support to the argument that children can be taught to be honest, and therefore supports the generality position in relation to the generality/specificity debate (Burton, 1963).

Another component in the DIP procedure was to train children to use an intrinsic schema when they resisted the temptation to steal. The findings on the children's intrinsic resistance responses indicated significance in favour of the DIP group relative to the GIP and no treatment control groups, while there was no significant difference between the GIP and no treatment control groups. During the training of the DIP group each child was sequentially and systematically taught a set phrase or statement to help define the temptation situation. Then an intrinsic reason was given as a rationale for resistance (Be Fair - treat others as I would like to be treated). This was followed by the original temptation problem situation. During treatment the child was encouraged to make a resistance decision to this temptation problem situation. This decision was again supported by the previously defined intrinsic schema, and positively consequated by visual

representations and verbal expressions of happiness for the owner and the child himself/herself. It would seem reasonable to suggest that the DIP group's significantly greater use of intrinsic schemata was due to the embedding of intrinsic schemata into the children's memory during DIP training. In evaluating this aspect of the findings however, it should be recalled that the intrinsic schema component interacted with other variables in the DIP package. A partialling out of the effect of the intrinsic schema component from other treatment components, such as the defining of temptation problem situations, the positive consequating of the intrinsic schema and legitimate alternative training was not attempted. The specific aim of the study was to assess the efficacy of the DIP procedure as a treatment package in facilitating resistance to the temptation to steal, and in addition to encourage children to use a higher morally defensible and developmental schema or process to motivate their resistance responding.

The findings on the moral judgement measure of the JHTST revealed no significant differences between the experimental and control groups on mean resistance scores. This finding was not unexpected as most of the children in all three of the groups demonstrated a high level of resistance at the time of pre-treatment. Therefore, due to these near ceiling resistance scores across groups, significant post-treatment differences between the groups were unlikely. These data however, do indicate that most children had acquired a 'no stealing' rule

at the time of pre-testing. These data, taken with the findings on the behavioural measure of the JHTST, suggest that after training there was a greater concordance between the DIP group's resistance on the behavioural and moral judgement measures compared to that of the GIP and no treatment control groups. Such a finding represents the aim of moral development studies (Kohlberg, 1976a).

It was also of research interest to examine whether legitimate alternative training in the DIP group would affect the children's legitimate alternative responses on the 'should do' measure of the JHTST. The data indicated no significant differences between the experimental and control groups. The same set of reasons offered for the failure of the DIP group to use significantly more legitimate alternative responses compared to the GIP and no treatment control groups on the 'did do' measure are further offered for these results on the 'should do' measure.

Again from the view point of transfer of training effects from the DIP procedure to the children's moral judgement responding it was expected that the DIP group would use significantly more intrinsic resistance processing responses relative to the GIP and no treatment control groups. The data confirmed this expectation. Also there was no significant difference between the GIP and no treatment control groups. It was established therefore that although there was no significant difference in resistance responding on the 'should do' measure

between groups, the kind of schema used to resist did differ between the groups. This finding suggests an improvement in the developmental nature of the DIP children's resistance on the moral judgement measure.

Researchers have established that younger children tend to focus on external consequences when reacting to a moral dilemma, while older children are more able to consider other aspects of moral dilemmas, such as the intentions of the actor (Kohlberg, 1976a; Piaget, 1977) and the feelings of the owner in temptation to steal dilemmas. Furthermore intrinsically motivated resistance responses are desirable as they can be regarded as moral responses.

A three month follow-up assessment on the DIP group revealed no significant difference in both resistance responses and intrinsically motivated resistance responses between post-treatment and follow-up treatment on the 'did do' measure and a significant increase from post to follow-up treatment on the 'should do' measure. These results indicate that the gains made by the DIP group were maintained on the 'did do' measure and even improved upon on the 'should do' measure.

A criticism of treatment programs is that their effects are short-term. This form of criticism would seem even more relevant to cognitively based programs where a considerable load is placed on the subject's memory capacity. These comments are of particular significance for educable mentally retarded subjects. The design of the present study therefore

included a three month follow-up testing session in an effort to respond to such criticisms.

The present results of sustained resistance levels in the DIP group on the behaviour measure suggest that many subjects in this group had effectively stored the resistance training information into long-term memory. Also the ability of the group to maintain the level of intrinsically motivated resistance responses indicates that this improved level of cognitive processing supports Bandura and McDonald's (1963) early claims that cognitive levels can be meaningfully affected by social learning variables. It was also of interest to note the significant increase in resistance on the moral judgement measure from post to follow-up treatment. However, the result must be interpreted cautiously. One interpretation of these results would suggest that there were delayed treatment effects.

Alternatively, the significant improvement from post to follow-up treatment in the DIP group on the moral judgement measure may be more of statistical than clinical significance. The post and follow-up means (7.2 and 7.43) were close to the early level on the 8-point resistance scale. However the variances were very small and a significant difference between means resulted.

Using the JHTST as a measure, the data provided evidence for the superiority of a specific direct instruction procedure over a general instruction procedure in facilitating



educable mentally retarded children's resistance behaviour in hypothetical temptation to steal situations. In addition the children's use of intrinsic behavioural and moral reasoning resistance schemata were enhanced significantly more by the DIP than by the GIP procedure. Furthermore significantly more children became categorical resisters in the DIP compared to GIP group. A follow-up test three months after post-treatment indicated that gains made in the DIP group had been maintained on the behavioural measure and improved upon on the moral judgement measure.

A qualification to the success of the DIP procedure was noted. Only approximately one quarter of the DIP group made a substantial improvement in resistance on the 'did do' measure of the JHTST. Several hypotheses were offered for this finding.

A close inspection of the GIP procedure indicated that a substantial proportion (45%) of the group regressed in their resistance behaviour on the 'did do' measure of the JHTST. Given the possible negative effects of a 'discovery' learning approach to teaching resistance to temptation to steal as exemplified in the GIP group, and the clear positive impact of the direct instruction procedure, represented by the DIP group, it would seem advisable, at least when teaching educable mentally retarded children to adopt the direct instruction model for the treatment and prevention of stealing.

The finding of greater resistance on the behavioural measure by a direct instruction procedure which required

children to use self-statements of a cognitive construction (Pressly, 1979) and consequating (Bandura, 1977) kind in a temptation to steal situation to guide their behavioural responding, attracts support from the cognitive-behaviour modification literature. From a wider perspective than stealing, Meichenbaum (1977) has demonstrated how schizophrenics can modify their behaviour by the use of self-statements. Similarly, Camp et al (1977) working with aggressive behaviour problem children has established the efficacy of the self-instructional model. Within the resistance to temptation and self control frameworks Mischel and Patterson (1978) have established the different types of self-verbalisation which are most effective in teaching pre-schoolers self control. Specifically from within the stealing domain, Guidry (1975) and Stumphauzer (1976) have shown the power of covert consequating self-statements of the self-reinforcing and self-punishing kind, in modifying stealing behaviour. Furthermore, Haines, Jackson and Davidson (1980) using a combination of direct instruction and cognitive-behaviour modification procedures established a program, based on Jackson's model of cognitive processing in hypothetical temptation to steal situations, which proved effective in facilitating resistance behaviour in a group of normal children. The present research used a similar program to increase resistance to stealing among educable mentally retarded children. Additionally advantages with direct instruction training, as used in the DIP procedure, as opposed to the type of general instruction,

as employed in the GIP procedure, in facilitating learning in other academic domains in retarded persons has been documented by a number of workers in the retardation area (Becker and Carnine, 1978; Becker, Engelmann and Thomas, 1975; Maggs and Patching, 1979).

(ii) Real Life Temptation Measures

The findings from the stealing and cheating real life temptation tests indicated that there was no significant difference between the three experimental groups. Also a comparison of the no treatment control group to the post only control group on both tests indicated that there was no substantial test sensitization effects, as there was no significant difference between the two control groups.

Although the result from the real life stealing test differs from the findings on the behavioural measure of the JHTST it can be strongly argued that the limitations on the validity of a real life situation, where a child is tempted to take smarties from a bowl during the brief absence of the experimenter, are considerable. These limitations include the artificiality, unfamiliarity, and detectability of the situation, as well as the general resistance demand characteristics of the situation. Further it was not possible to manipulate physical need so there was not evidence that the children were tempted. It is suggested that real life temptations of a similar kind to those used in the JHTST would provide a more face valid measure of the correspondence between the children's behaviour in real life temptation to steal situations and on the JHTST. The

present failure to find a correspondence between the real life situation used in this study and the results from the experimental groups' responses to the behavioural measure of the JHTST should therefore not be regarded as substantially detracting from the credibility of the success of the DIP procedure.

The non significant findings on the cheating test were not entirely unexpected as the moral developmental literature suggests that children's behaviour in different moral domains is not highly correlated (Lickona, 1976; Mischel and Mischel, 1976). This result indicates that the effects of training on the DIP procedure are confined specifically to the stealing domain.

### (iii) The General Moral Judgement Measures

The results of Stephens' (1974) two general moral judgement measures demonstrated no significant difference between the three groups on the clumsiness and stealing test, and no significant differences between the DIP and GIP groups on the collective responsibility test. However, there was a significant difference between the GIP and no treatment control groups on the collective responsibility test.

Overall these findings suggest that the effects of specific training in stealing situations, whether the training has been a direct instruction program or a general awareness of stealing program, do not spread to children's moral judgement of intentionality as tapped by the clumsiness and stealing test.

The general instruction program relative to the no treatment program however did influence how children judged a character should be punished.

(iv) The Impulsivity and Efficiency Measures

Using Salkind and Wright's (1977) formula for establishing impulsivity and efficiency scores, the findings on the efficiency index of the MFFT indicated no significant differences between the three groups. On the impulsivity index the DIP group after treatment was significantly less impulsive than the GIP and no treatment control groups. There was no significant difference between the GIP and no treatment control groups.

Taken together these findings suggest that the DIP procedure, which included a component instructing children to 'think' and reflect on a resistance schema prior to acting, did not increase the children's accuracy on a match to sample task, but did make them more reflective in approaching such a task. Accordingly a stealing specific DIP procedure produced general effects on children's reflectivity in a problem solving task of an academic nature. Clearly this finding has far reaching ramifications for the special educator. At the very least it indicates that by using the DIP procedure to facilitate resistance to stealing in children, that such a procedure may have the added advantage of giving a child a cognitive strategy to decrease his impulsivity in general in a problem solving context.

## CHAPTER 13

### CONCLUSIONS OF STUDY II

The major finding, using the hypothetical temptation to steal measure, was that the DIP procedure increased educable mentally retarded children's resistance on the behavioural measure significantly more than the GIP, or no treatment control group procedures. Moral judgement data on the JHTST indicated high levels of resistance generally amongst the children, but with no significant difference between the groups.

These findings suggest that most children had internalised a 'no stealing' rule. However, the children instructed specifically in resistance strategies (DIP) revealed a higher concordance between their resistance responses on the 'did do' and 'should do' measures than children trained by a general, non-directive, awareness of stealing program (GIP). This result was also reflected in the greater number of children who became categorical resisters in the DIP relative to the other two groups. This outcome is consistent with the results of an earlier study by Haines, Jackson and Davidson (1980). Also the gains made by the DIP group were maintained at the time of a follow-up assessment.

When the children's resistance responses on the 'did do' and 'should do' measures were analysed for legitimate alternative solutions to stealing there was no significant difference between the groups. Although hypotheses were

generated to account for this result, further research was recommended on this aspect of the DIP procedure.

On the real-life temptation measures there were no significant differences between the experimental and control groups on the stealing or cheating tests.

The data from the general moral judgement measure indicated no significant difference between the groups on the clumsiness and stealing measure, but a significant improvement by both the experimental groups as compared to the pre-post control group on the collective responsibility measures. These results suggest that, irrespective of the specificity or generality of a stealing program, it will have a minimal influence on a child's judgemental orientation toward intentionality, and a maximum influence on his/her orientation toward placing responsibility for a transgression response on the wrongdoer.

When it comes to the reflectivity data there was a significant improvement by the DIP group compared to the GIP and no treatment control groups. The overall findings of a significant improvement in the DIP group's reflectivity and resistance responding suggests a positive relationship between a child's reflection in a temptation to steal situation and his/her resistance responding.

There are three main implications which appear to follow from Study II :

1. That the direct instruction procedure represents an effective cognitive-behavioural method for the prevention and treatment of educable mentally retarded children's stealing behaviour.

2. That the legitimate acquisition component of the procedure needs to be strengthened. Alternatively, the assessment of the children's propensity to use legitimate alternative responses needs to be improved. Perhaps, more direct probes than those used in the JHTST are required to determine whether the educable mentally retarded child would use a legitimate alternative response in a temptation to steal situation.

3. That specific resistance training can decrease a child's impulsivity in problem situations. This finding has clear implications for special educators working in social and academic areas.

Recent data has shown that a few teachers who have applied the DIP procedure to individual cases of chronic stealers have been able to successfully modify their stealing behaviour. This recent evidence together with the findings from Study II leads to the general recommendation that a DIP type program should be built into the school curriculum as one method of preventative education to decrease the problem of stealing in the community.



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## APPENDICES

APPENDIX I

A - F

APPENDIX I-A

## THE AUDIO/SLIDE PRESENTATION OF THE JACKSON HYPOTHETICAL TEMPTATION TO STEAL TEST (JHTST)

Experimenter says:

Hello! How are you? My name is ..... We are going to play a story game. You will see some pictures of boys/girls.

Here is the first story. (Example B).

Can you see the boy/girl? (holding the baby). I want you to think you are the boy/girl in the picture. Can you do that? Good. So when you answer you will say, "I did ..... or I did not do ....."

Now I will tell you about the story.

READ STORY

Can you finish your story? Why did you .....?

Have you got the idea? Yes.

EXPERIMENTER LEAVES.

PRACTICE EXAMPLE

A One day while Mum was in town she left you home with your baby brother. Alright? She told you to get the tea ready.

(Now you finish your story), what did you do?  
should

Why did you?  
should

B One day you were walking through your neighbour's apple orchard. OK? There was no one at home and you felt hungry

(Now you finish your story), what did you do?  
should

Why did you?  
should

Some of the rest of the stories are about boys/girls being tempted to steal things. Do you know what I mean? What you say is top secret - no one will know. OK? Remember you are the boy/girl in the picture.

Here is the story.

READ STORY

Can you finish your story. Why did you .....?

1. Here is another story.

One day your mother gave you 40 cents and sent you down to the shop to buy some cakes. The cakes cost 35 cents but when the shopkeeper gave you the change he handed you 10 cents which was of course 5 cents too much. (OK?). You looked at the change and knew there was too much.

Now you finish your story, what did you do?  
should

Why did you?  
should

2. Here is another story.

One hot Saturday morning when you were going to the swimming pool by the bus, there were lots and lots of people getting on the bus. You knew that you could easily squeeze by the

driver without paying your 10 cents fare and without being noticed. (Alright?). In this way you could keep your 10 cents for spending after the swim.

Now you finish your story, what did you do?  
should

Why did you .....?  
should

### 3A BOYS

After lunch one day John and you went for a walk down to the sweet shop. Before going into the shop John said that he would go down one end of the counter and buy some sweets then while the shopkeeper was serving him you could easily take a packet of Lifesavers from the counter, if you wanted to. (OK?). Both of you went into the shop, John went down one end of the counter and you went down the other end. There right in front of you were the Lifesavers.

(Now you finish your story), what did you do?  
should

Why did you .....?  
should

### 3B GIRLS

After lunch one day Joan and you went for a walk down to the sweet shop. Before going into the shop Joan said that she would go down one end of the counter and buy some sweets then while the shopkeeper was serving her you could easily take



a packet of Lifesavers from the counter, if you wanted to.  
(OK?). Both of you went into the shop, Joan went down one  
end of the counter and you went down the other end. There  
right in front of you were the Lifesavers.

(Now you finish your story), what did you do?  
should

Why did you .....?  
should

#### 4. Here is another story

One day at the football after nearly everybody had gone, you  
were walking past the stand when you saw a small purse under  
the seat. You bent down and picked it up. When you opened  
it you found it had one dollar 20 cents in it. There was  
a name on the flap but you couldn't read it very easily.

(Now you finish your story), what did you do?  
should

Why did you .....?  
should

#### 5. Here is another story

One day you were walking through Coles Store when you saw  
a pocket knife/bracelet which you badly wanted. (OK?)  
You did not have any money. There didn't seem to be anybody  
behind the counter just where you were.

(Now you finish your story), what did you do?  
should

Why did you .....?  
should

## 6. Here is another story

At school you noticed that some of the other boys and/or girls seemed to have more money to spend than you had.

(OK?). They were always showing you things they had bought.

Mum and Dad said they couldn't afford to give you any money.

You knew however that Mum kept some bits of money in a drawer in her bedroom. She never seemed to count this money.

(OK?). One day while Mum and Dad were out you went into the bedroom, opened the drawer and saw that there was quite a few silver coins.

(Now you finish your story), what did you do?  
should

Why did you .....?  
should

## 7. Here is another story

One day when you were in town your little brother lost a very new pocket knife your mother had given him for his birthday. He was most upset because he knew Mum would be very cross. (OK?). Shortly after you were both walking through Woolworths and saw some knives just like the one your brother had lost. You did not have any money. (Alright?). You thought about what had happened to your little brother and what Mum might say to him.

(Now you finish the story), what did you do?  
should

Why did you .....?  
should

8. Here is another story.

One day your mother sent you to the fruit shop to buy 6 apples.

She gave you a dollar and told you not to spend the change.

(OK?). She said the apples would cost about 40 cents.

When you bought the apples at the shop you found they only

cost 30 cents. (Alright?). You thought if you bought a

drink for 5 cents you could tell Mum the apples cost 35 cents.

After thinking about it you ...

(Now you finish your story), what did you do?  
should

Why did you .....?  
should

#### 'SHOULD DO' PRESENTATION

Could you tell me what you should do in this story?

One day you were walking in very muddy wet boots and

you stepped inside your house right onto the carpet.

What should you have done?

Experimenter says:

Last time you saw the slides I asked you what you did do.

This time I am going to ask you what you should do. OK?

PROCEED TO STORY 1 (leave out the two example slides, A and B).

APPENDIX I-B

## JACKSON PERSON AND PARENTAL REACTION TEST

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revised version 1979

---

Please fill in these little boxes correctly with a tick ( ), your sex and age and write the name of your school.

Boy

Age

School

Girl

---

This is a test about what children feel and think when in temptation to steal situations. In each story there is a choice.

READ each line through carefully and imagine that you are the boy or girl in the situation. When you have done that find the story ending that is most like you and put the letter of that story in the square at the end of the long box.

Practice Example

If I got caught by a policeman for stealing something

- (a) I would be real scared  
 (b) It wouldn't bother me at all

☐

If I live two miles from school and could catch a bus, I would mostly

- (a) Walk to school  
 (b) Take the bus

☐

In this paper there are no right or wrong answers, only answers that are most like you. REMEMBER, YOU DO NOT HAVE TO PUT YOUR NAME ON THE PAPER so you can say exactly what is most like you and no one will know.

WAIT TILL YOU ARE TOLD BEFORE YOU TURN  
OVER AND BEGIN

1. When I am tempted to steal something, I usually

- (a) find it easy to decide right from wrong  
(b) find it difficult to decide right from wrong

☐

2. When I am tempted to steal something I tell myself

- (a) it's easy to get away with things and no one will know  
(b) it's very hard and you might get found out

☐

3. When I am tempted to steal things

- (a) something inside me tells me I shouldn't do it  
(b) nothing inside me tells me I shouldn't do it

☐

4. When I have been caught for pinching something

- (a) I think what bad luck  
(b) I think that I deserved to be caught

☐

5. When I have been caught for pinching something

- (a) I tell myself I won't steal again  
(b) I never tell myself anything

☐

6. When I have pinched something

- (a) I never take it back  
(b) I try to take it back and apologise

☐

7. When I have pinched something

- (a) I usually accept the blame  
(b) I usually blame someone else

☐

8. When I have been caught for pinching something

- (a) I usually come clean and tell all  
(b) I go all quiet and don't speak

☐

9. When I have been caught for pinching something

- (a) I never apologise
- (b) I usually apologise

☐

10. When I pinch something

- (a) it worries me and feel I ought to tell
- (b) it doesn't worry me and I don't feel I ought to tell

☐

---

PARENTAL FACTORS

11. If ever I get caught for pinching my mother usually

- (a) explains then smacks
- (b) explains but doesn't smack

☐

12. My mother

- (a) often tells stories about what happens to people who steal
- (b) never mentions any of those people who get caught

☐

13. My mother usually

- (a) says it's OK to keep little things you find
- (b) says it's not right to keep anything

☐

14. My mother

- (a) often tells stories about being caught for things she stole when she was little
- (b) never says anything about being caught for stealing when she was little

☐

15. My mother usually

- (a) shouts and smacks if I pinch anything
- (b) talks quietly and explains

☐

16. My mother

- (a) growls and is cross
- (b) smiles and laughs

☐

---

17. If ever I get caught for pinching, my father usually

- (a) explains then smacks
- (b) explains but doesn't smack

☐

18. My father

- (a) often tells stories about what happens to people who steal
- (b) never mentions any of those people who get caught

☐

19. My father usually

- (a) says it's OK to keep little things you find
- (b) says it's not right to keep anything

☐

20. My father

- (a) often tells stories about being caught for things he stole when he was little
- (b) never says anything about being caught for stealing when he was little

☐

21. My father usually

- (a) shouts and smacks if I pinch anything
- (b) talks quietly and explains

☐

22. My father often

- (a) growls and is cross
- (b) smiles and laughs

☐

## APPENDIX I-C

### STEPHENS GENERAL MORAL JUDGEMENT TESTS

#### (1) Collective Responsibility

Presentation: The examiner seeks to determine if the subject considers it just, in general or in cases where the offender is unknown, to punish the entire group for something a member of the group has done.

Example: (Figure 42)

Some boys were playing football near a school. One boy kicked the ball. He broke a window in a house. A man came out of the house. He asked who broke the window. No-one said anything. The other boys didn't tell on him. The man went and got their school principal.

What should the principal do?

Whom should he punish? No-one? Or the whole class? Why?

#### (2) Clumsiness and Stealing

Presentation: The aim is to find out if the child is more concerned with motive or with material results. The stories are read in pairs; following each pair two questions are asked: "Are these people each as bad as the other? Which of the two is the worst? Why?" Each question will probably result in an extended conversation. After reading each story it is well to have the subject repeat it before questioning him on it. This assures his understanding of it.

Examples: (Figure 43(a) & (b))

1a. Mother said to John "Come and eat lunch." John went to eat his lunch. He went to pick up a glass of water. His arm banged into a tray of dishes. The dishes fell on the floor. 15 dishes broke.

1b. Mother said to Henry, "Do not eat any cookies." As soon as mother left he ate some cookies. Henry dropped the cookie jar on the floor, and the cookie jar lid broke.

Which of the two boys is worse?

Why?



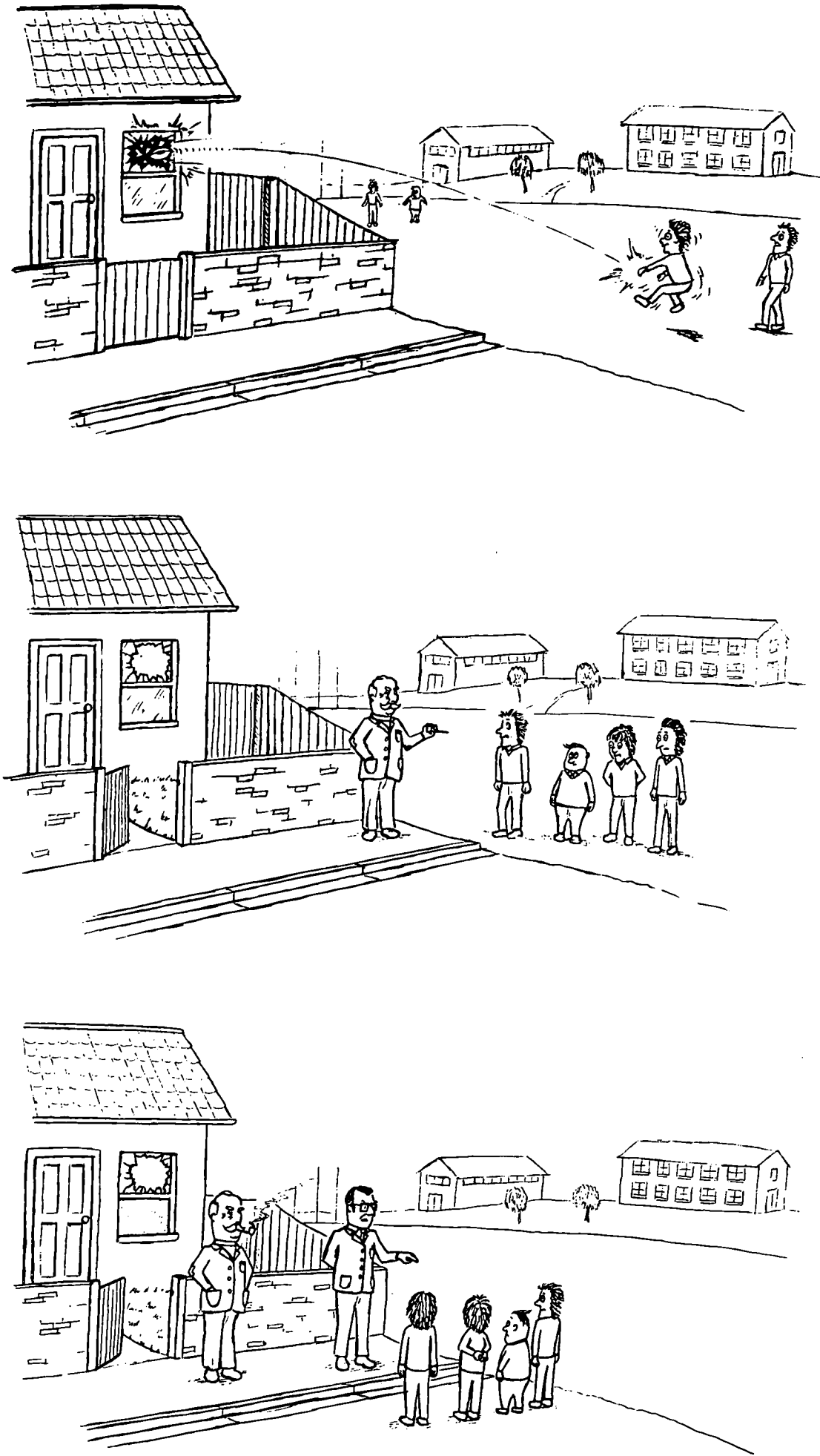


FIGURE 42      An Example of a Collective Responsibility Story

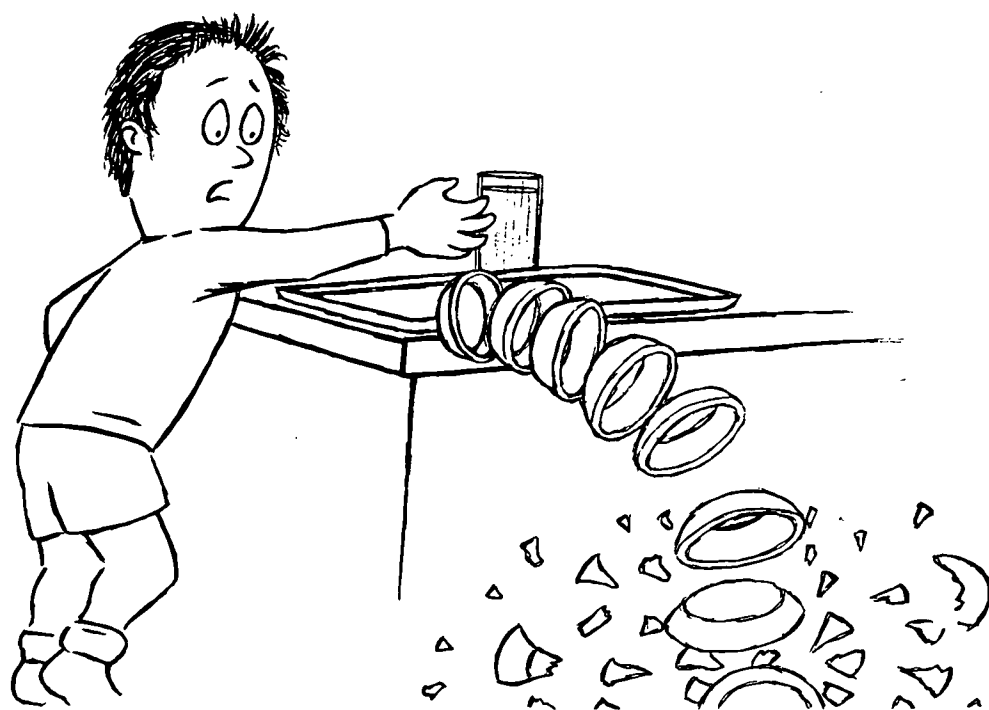
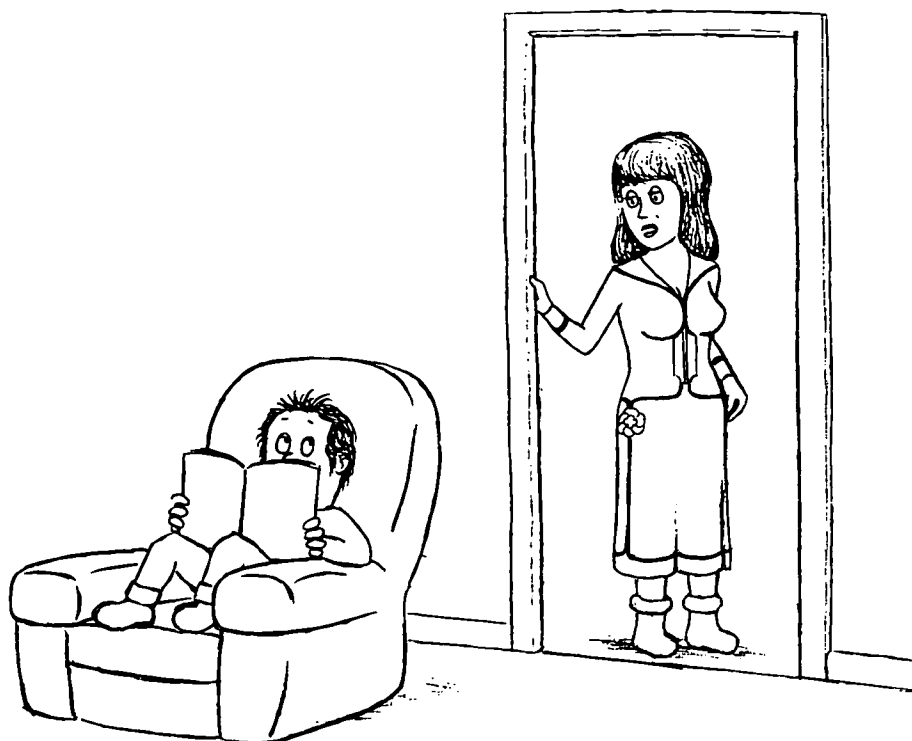


FIGURE 43a

An Example of a Clumsiness and Stealing Story:  
A Boy When Doing the 'Right' Thing Breaks Many  
Dishes

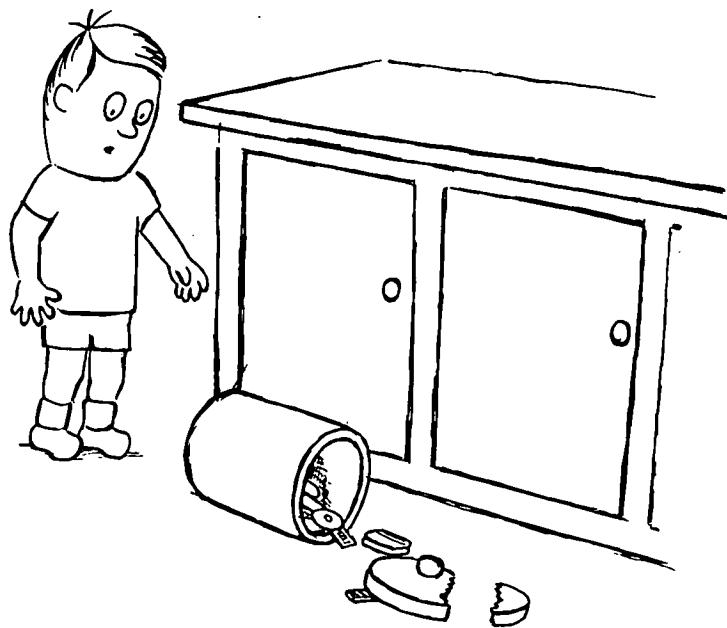


FIGURE 43b

An Example of a Clumsiness and Stealing Story:  
A Boy Doing the 'Wrong' Thing Breaks a Lid of  
a Jar

APPENDIX I-D

## DIRECTIONS FOR MATCHING FAMILIAR FIGURES TEST

"I am going to show you a picture of something you know and then some pictures that look like it. You will have to point to the picture on this bottom page (point) that is just like the one on this top page (point). Let's do some for practice." E shows practice items and helps the child to find the correct answer. "Now we are going to do some that are a little bit harder. You will see a picture on top and six pictures on the bottom. Find the one that is just like the one on top and point to it."

E will record latency to first response to the half-second, total number of errors for each item and the order in which the errors are made. If S is correct, E will praise. If wrong, E will say, "No, that is not the right one. Find the one that is just like this one (point)." Continue to code responses (not times) until child makes a maximum of six errors or gets the item correct. If incorrect, E will show the right answer.

It is necessary to have a stand to place the test booklet on so that both the stimulus and the alternatives are clearly visible to the S at the same time. The two pages should be practically at right angles to one another.

Note: It is desirable to enclose each page in clear plastic in order to keep the pages clean.

APPENDIX I-E

## REAL-LIFE STEALING TEST

Instructions

A dish of pre-counted smarties (lollies) is placed on the table in the testing room. The experimenter (E) then goes to get the child.

E does not mention the smarties. If asked about them E simply says that they do not belong to him/her but to another person who sometimes works in the room.

E then directs the child to draw three pictures of his/her own choosing. After the first picture is drawn E makes an excuse to leave the room for a minute or two. Before going s/he tells the child to finish his/her drawings.

After waiting outside of the room for a couple of minutes the E re-enters the room, thanks the child for doing the drawing and then politely dismisses the child.

E then counts the smarties in the bowls and notes down on a scoring sheet the number of smarties missing.

APPENDIX I-F

## THE REAL-LIFE CHEATING TEST

General Instructions

"This is a ball game. Just like the games you see at side shows or fairs.

You have to make this bell ring by moving the man.

What you do is roll the ball at the man; if the bell rings you win a prize!

The prize is 5 jelly beans or 1 plastic animal of your choice.

O.K.? "

Demonstration

E takes a ball and rolls it at the man at such a speed that it hits the man but does not cause the bell to ring.

E takes the next ball and this time makes the bell ring by hitting the man harder.

E says "Part of the game is that you only have 3 balls to roll.

If one of the 3 balls rolls back towards you just roll it to the back of the box. O.K.?"

Now remember if you can make the bell ring by moving the man you can have either 5 jelly beans or 1 plastic animal."

E says "I have to go outside for a minute - I will come back and ask you if you could make the bell ring?"

E leaves and listens outside until the 3 balls have been rolled and then waits 15 seconds before entering the room.

E walks into the room and first shows the child the jelly beans or plastic animals and then says, "Did you ring the bell by moving the man?" If the answer is "no" the child is merely sent back to class, if "Yes" his reward is given.

APPENDIX II

A - I

APPENDIX II-A

Description of age, sex, IQ and S.E.S. data for all subjects.

Subject	Variables				Subject	Variables			
	Age	Sex	IQ	SES		Age	Sex	IQ	SES
1	134	1	62	3	22	145	1	52	3
2	174	1	70	4	23	148	1	51	3
3	148	1	64	3	24	149	1	70	4
4	176	1	70	3	25	159	1	62	3
5	135	1	70	3	26	191	1	53	4
6	142	0	69	4	27	148	1	50	4
7	164	0	67	4	28	167	1	63	3
8	142	1	70	1	29	149	1	59	4
9	154	1	60	2	30	143	1	68	4
10	133	1	72	4	31	155	1	58	2
11	136	1	74	3	32	189	1	59	1
12	135	0	68	1	33	174	1	68	2
13	138	0	68	2	34	142	0	57	3
14	143	0	71	2	35	151	0	68	2
15	149	1	57	4	36	168	0	50	4
16	183	1	51	4	37	174	1	70	4
17	159	1	70	4	38	140	1	69	3
18	188	1	63	3	39	174	1	67	3
19	158	0	53	3	40	142	1	72	4
20	161	0	52	3	41	175	0	75	4
21	135	0	61	1	42	157	0	75	4



APPENDIX II-A  
(continued)

Subject	Variables				Subject	Variables			
	Age	Sex	IQ	SES		Age	Sex	IQ	SES
43	182	1	67	3	64	132	0	51	3
44	136	1	50	1	65	138	1	69	4
45	180	1	53	4	66	145	1	64	3
46	186	1	52	4	67	145	1	57	3
47	178	1	63	4	68	143	1	72	3
48	138	0	63	2	69	174	1	70	4
49	145	0	74	3	70	154	1	54	4
50	187	1	50	2	71	158	1	75	3
51	152	1	50	3	72	183	1	67	3
52	138	1	60	3	73	147	1	61	4
53	145	1	68	4	74	146	0	75	4
54	140	1	55	2	75	162	0	71	2
55	150	1	69	2	76	183	0	67	3
56	148	1	53	3	77	136	0	71	4
57	180	1	59	4	78	141	1	68	1
58	164	1	62	3	79	149	1	71	3
59	187	1	59	3	80	181	1	75	4
60	184	1	54	3	81	149	1	75	3
61	166	0	54	2	82	147	1	62	1
62	139	0	55	2	83	140	1	71	3
63	139	1	61	3					

APPENDIX II-B

Individual scores on the 'Did do' and 'Should do' measures of the JHTST and the scores on the JPPRT for all subjects

	JHTST				JPPRT	
Subject	'Did do'		'Should do'		Person Parent	
	Resist	Legitimate Alternative	Resist	Legitimate Alternative		
1	4	0	3	0	5	8
2	8	1	8	2	9	3
3	6	0	6	0	6	6
4	1	0	8	0	9	2
5	6	0	8	2	9	4
6	0	0	7	2	10	4
7	0	0	7	0	8	9
8	7	0	8	0	8	6
9	0	0	7	0	8	2
10	7	2	8	2	9	7
11	0	0	7	0	8	5
12	4	1	8	0	8	6
13	5	0	8	1	7	9
14	0	0	8	1	9	11
15	1	0	4	0	4	6
16	1	0	8	0	7	7
17	0	0	8	0	9	5
18	1	0	8	0	5	8
19	2	0	1	0	4	8
20	2	0	2	0	9	6
21	2	0	5	0	5	5

APPENDIX II-B  
(continued)

Subject	JHTST				JPPRT	
	'Did do'		'Should do'		Person Parent	
	Resist	Legitimate Alternative	Resist	Legitimate Alternative		
22	1	0	8	1	8	8
23	8	0	8	0	9	9
24	2	0	6	0	10	4
25	2	0	8	4	9	2
26	5	0	7	0	8	8
27	3	0	7	0	3	6
28	7	1	8	0	5	8
29	6	0	8	0	7	6
30	8	0	8	0	9	9
31	8	0	8	2	6	8
32	1	0	7	1	4	8
33	1	0	7	0	6	10
34	1	0	8	2	4	10
35	5	0	7	0	9	4
36	2	0	4	0	5	9
37	0	0	8	3	9	10
38	5	1	8	1	9	11
39	8	0	8	0	9	6
40	2	0	8	0	9	10
41	3	0	8	1	9	8
42	7	3	8	1	6	5

APPENDIX II-B  
(continued)

	JHTST				JPPRT	
Subject	'Did do'		'Should do'		Person Parent	
	Resist	Legitimate Alternative	Resist	Legitimate Alternative		
43	1	0	7	0	7	5
44	5	0	7	0	5	7
45	6	0	6	0	5	6
46	2	0	4	0	9	7
47	2	0	8	0	7	9
48	3	0	4	0	8	7
49	0	0	7	0	5	8
50	5	0	8	0	9	8
51	6	0	6	0	6	8
52	1	0	8	0	9	9
53	1	1	8	0	10	7
54	0	0	4	0	7	4
55	6	0	7	0	4	5
56	3	0	8	3	7	5
57	4	0	8	0	5	4
58	0	0	7	0	9	9
59	0	0	8	0	3	5
60	2	0	2	0	5	6
61	4	2	6	0	5	7
62	0	0	8	0	9	7
63	4	0	7	0	8	8

APPENDIX II-B  
(continued)

	JHTST				JPPRT	
Subject	'Did do'		'Should do'		Person Parent	
	Resist	Legitimate Alternative	Resist	Legitimate Alternative		
64	3	0	5	0	2	6
65	3	0	8	1	4	7
66	7	0	7	0	8	5
67	7	1	7	0	5	5
68	8	1	8	1	5	5
69	3	1	8	1	7	10
70	7	0	8	0	6	6
71	2	0	4	1	10	7
72	8	0	8	0	10	5
73	8	0	8	1	8	6
74	0	0	8	0	8	6
75	3	0	8	1	9	8
76	1	0	8	2	9	7
77	1	0	8	2	9	9
78	3	0	8	1	8	5
79	2	0	3	0	6	7
80	8	0	8	2	9	4
81	1	0	7	0	9	6
82	4	0	8	0	10	12
83	2	0	4	0	6	5

Individual scores on the General Moral Judgement Measure, the KMFFT, and Real-life Temptation Tests.

Subject	General Moral Judgement		KMFFT		Real-life Temptation Tests	
	Clumsiness & Stealing	Collective Responsibility	Impulsivity	Efficiency	Steal	Cheat
1	2.0	1.67	3.20	0.92	0	1
2	2.25	2.66	0.99	-0.51	0	1
3	2.25	2.0	1.43	-1.23	1	1
4	2.0	2.0	-1.87	-0.73	0	1
5	3.0	2.66	0.93	0.11	0	1
6	2.0	3.0	1.69	-0.09	1	0
7	2.0	2.33	-1.19	0.83	0	1
8	2.25	2.5	0.55	-0.07	0	1
9	2.5	1.0	-2.25	1.33	0	1
10	2.0	3.0	-0.12	0.60	0	0
11	1.75	2.0	-3.03	0.71	1	1
12	2.25	3.0	0.07	-0.99	0	0
13	2.5	2.0	1.71	-0.11	1	1
14	3.0	2.0	0.56	-0.08	1	0
15	1.75	2.33	2.50	1.62	1	1
16	2.75	2.33	2.16	1.12	0	1
17	2.5	4.0	-1.94	-0.10	0	0
18	2.25	2.0	0.76	-0.84	0	0
19	2.0	2.0	-0.19	0.39	0	0
20	2.25	1.0	-0.29	-1.75	0	0
21	2.5	2.66	-0.50	0.14	0	1

APPENDIX II-C  
(Continued)

Subject	General Moral Judgement		KMFFT		Real-life Temptation Tests	
	Clumsiness & Stealing	Collective Responsibility	Impulsivity	Efficiency	Steal	Cheat
22	2.0	1.33	2.17	-0.29	0	1
23	2.0	4.0	-4.47	1.59	0	0
24	1.75	4.0	-0.50	-0.98	1	0
25	2.25	2.0	-3.14	0.82	0	0
26	2.5	2.0	0.11	1.49	0	1
27	2.0	1.66	3.27	1.13	0	1
28	2.0	2.0	0.34	2.10	1	1
29	2.25	2.33	1.34	0.26	0	0
30	3.0	2.33	0.40	-1.88	1	1
31	2.5	1.66	-0.70	-1.90	0	0
32	2.75	1.66	0.89	0.43	0	0
33	2.25	3.33	-3.40	0.24	0	1
34	3.0	2.0	-0.84	-0.92	0	1
35	2.0	2.33	-0.67	0.03	0	0
36	2.0	1.0	1.31	0.57	0	1
37	3.0	3.0	-4.36	2.32	0	1
38	2.0	2.66	-0.54	0.46	0	1
39	3.0	4.0	-1.30	0.38	0	0
40	1.75	2.0	-0.97	-0.51	0	0
41	2.0	2.66	0.08	-1.00	0	0
42	3.0	2.66	-1.70	-0.34	0	0

APPENDIX II-C  
(continued)

Subject	General Moral Judgement		KMFFT		Real-life Temptation Tests	
	Clumsiness & Stealing	Collective Responsibility	Impulsivity	Efficiency	Steal	Cheat
43	2.75	2.66	-0.30	-0.34	0	0
44	1.5	4.0	2.92	0.08	1	0
45	2.0	1.0	3.27	1.13	0	0
46	1.5	2.0	0.73	0.87	0	0
47	2.0	2.0	0.97	-0.49	0	1
48	2.75	1.66	1.82	0.90	0	1
49	2.0	1.66	-0.09	-1.95	0	0
50	2.75	3.0	-0.77	-0.43	0	0
51	2.0	2.0	-1.83	-1.05	0	1
52	1.5	1.66	1.09	-0.89	0	1
53	2.0	2.66	-0.43	-0.21	0	0
54	2.25	3.66	0.34	-0.42	0	0
55	2.0	2.0	0.51	-0.59	1	0
56	1.5	3.66	-0.96	1.16	0	1
57	2.5	2.67	-3.27	3.47	0	1
58	2.0	2.33	-1.42	-0.34	1	0
59	2.25	2.0	-0.30	0.22	1	0
60	3.0	1.33	0.88	-0.96	0	0
61	1.75	1.0	1.67	1.89	0	1
62	2.25	1.33	-0.89	1.71	0	1
63	2.25	1.0	2.19	0.53	0	0



APPENDIX II-C  
(Continued)

Subject	General Moral Judgement		KMFFT		Real-life Temptation Tests	
	Clumsiness & Stealing	Collective Responsibility	Impulsivity	Efficiency	Steal	Cheat
64	2.5	1.0	1.64	0.80	0	0
65	1.75	2.33	0.56	-0.36	0	0
66	2.0	1.0	3.17	1.51	0	0
67	2.0	3.0	3.26	1.86	1	0
68	2.0	4.0	-0.13	-0.23	0	1
69	2.5	2.0	0.96	0.08	0	1
70	2.5	2.0	0.57	-0.59	0	1
71	2.0	2.0	-1.74	-0.86	0	0
72	2.0	2.0	1.22	0.38	0	1
73	2.0	2.0	1.47	-0.99	0	1
74	2.75	1.66	-0.48	-1.56	0	0
75	2.25	1.66	-0.64	-1.67	0	0
76	2.5	2.0	1.28	-0.52	0	0
77	2.75	2.0	0.68	1.76	1	1
78	2.25	2.33	-0.76	-0.72	0	0
79	1.75	1.0	-0.21	-1.55	1	1
80	2.3	2.3	-2.67	-1.05	0	0
81	2.25	1.0	-1.02	0.94	0	1
82	2.0	2.0	-1.67	0.09	0	1
83	2.5	2.0	-1.57	0.73	0	0

APPENDIX II-D

Individual scores on the 3 Resistance Cognitive Process Categories by each of the 83 subjects on the 'Did do' measure of the JHTST.

284.

Cognitive Process Category									
	Right/Wrong	Extrinsic	Intrinsic						
	3.0000	3.0000	5.0000	0.0000	3.0000	0.0000	0.0000	3.0000	0.0000
	4.0000	0.0000	4.0000	2.0000	0.0000	0.0000	1.0000	0.0000	0.0000
	2.0000	2.0000	1.0000	1.0000	5.0000	1.0000	0.0000	3.0000	2.0000
	3.0000	4.0000	2.0000	2.0000	0.0000	1.0000	1.0000	3.0000	2.0000
	0.0000	1.0000	6.0000	1.0000	2.0000	5.0000	1.0000	4.0000	6.0000
	1.0000	1.0000	1.0000	0.0000	4.0000	4.0000	0.0000	0.0000	0.0000
	4.0000	1.0000	3.0000	0.0000	0.0000	1.0000	4.0000	0.0000	4.0000
	2.0000	2.0000	0.0000	2.0000	6.0000	3.0000	4.0000	1.0000	2.0000
	6.0000	0.0000	0.0000	1.0000	0.0000	1.0000	1.0000	2.0000	1.0000
	1.0000	2.0000							
	1.0000	3.0000	1.0000	1.0000	0.0000	0.0000	0.0000	2.0000	0.0000
	2.0000	0.0000	0.0000	1.0000	0.0000	1.0000	0.0000	0.0000	0.0000
	0.0000	0.0000	0.0000	0.0000	2.0000	0.0000	1.0000	1.0000	0.0000
	3.0000	2.0000	6.0000	6.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	0.0000	4.0000	2.0000	0.0000	0.0000	2.0000	0.0000	1.0000	0.0000
	0.0000	0.0000	2.0000	0.0000	1.0000	0.0000	1.0000	0.0000	0.0000
	0.0000	0.0000	1.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	1.0000	1.0000	6.0000	4.0000	1.0000	0.0000	3.0000	0.0000	4.0000
	2.0000	0.0000	2.0000	0.0000	0.0000	1.0000	0.0000	6.0000	0.0000
	1.0000	0.0000							
	0.0000	2.0000	0.0000	0.0000	3.0000	0.0000	0.0000	2.0000	0.0000
	1.0000	0.0000	0.0000	2.0000	0.0000	0.0000	0.0000	0.0000	1.0000
	0.0000	0.0000	1.0000	0.0000	1.0000	1.0000	1.0000	1.0000	1.0000
	2.0000	0.0000	0.0000	0.0000	1.0000	0.0000	0.0000	2.0000	0.0000
	0.0000	0.0000	0.0000	1.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	1.0000	1.0000	0.0000	0.0000	0.0000	2.0000	0.0000	1.0000	0.0000
	2.0000	2.0000	0.0000	0.0000	0.0000	1.0000	0.0000	0.0000	0.0000
	0.0000	0.0000	1.0000	1.0000	1.0000	0.0000	0.0000	1.0000	2.0000
	0.0000	0.0000	1.0000	0.0000	1.0000	1.0000	1.0000	0.0000	0.0000
	2.0000	0.0000							

# APPENDIX II-E

Individual scores on the 2 Yielding Cognitive Process Categories by each of the 83 subjects on the 'Did do' measure of the JHTST.

Cognitive Process Category									
	Extrinsic								
	4.0000	0.0000	2.0000	7.0000	1.0000	7.0000	7.0000	1.0000	7.0000
	1.0000	7.0000	3.0000	2.0000	7.0000	6.0000	6.0000	7.0000	5.0000
	5.0000	5.0000	6.0000	6.0000	0.0000	5.0000	5.0000	3.0000	4.0000
	0.0000	1.0000	0.0000	0.0000	6.0000	6.0000	6.0000	2.0000	5.0000
	7.0000	2.0000	0.0000	5.0000	4.0000	1.0000	6.0000	3.0000	2.0000
	6.0000	5.0000	4.0000	8.0000	3.0000	2.0000	6.0000	7.0000	7.0000
	2.0000	4.0000	4.0000	7.0000	7.0000	5.0000	4.0000	7.0000	4.0000
	4.0000	4.0000	0.0000	1.0000	0.0000	4.0000	1.0000	5.0000	0.0000
	0.0000	7.0000	4.0000	7.0000	7.0000	4.0000	5.0000	0.0000	7.0000
	4.0000	6.0000							
	0.0000	0.0000	0.0000	0.0000	1.0000	1.0000	1.0000	0.0000	1.0000
	0.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	2.0000
	1.0000	1.0000	0.0000	1.0000	0.0000	1.0000	1.0000	0.0000	1.0000
	0.0000	1.0000	0.0000	0.0000	1.0000	1.0000	1.0000	1.0000	1.0000
	1.0000	1.0000	0.0000	1.0000	1.0000	0.0000	1.0000	0.0000	0.0000
	0.0000	1.0000	1.0000	0.0000	0.0000	0.0000	1.0000	0.0000	1.0000
	0.0000	0.0000	0.0000	1.0000	1.0000	1.0000	0.0000	1.0000	0.0000
	1.0000	1.0000	1.0000	0.0000	0.0000	1.0000	0.0000	1.0000	0.0000
	0.0000	1.0000	1.0000	0.0000	0.0000	1.0000	1.0000	0.0000	0.0000
	0.0000	0.0000							

# APPENDIX II-F

Individual scores on the 3 Resistance Cognitive Process Categories by each of the 83 subjects on the 'Should do' measure of the JHTST.

Cognitive Process Category									
		Right/Wrong							
	Right/Wrong	3.0000	4.0000	5.0000	7.0000	5.0000	4.0000	0.0000	4.0000
		3.0000	1.0000	1.0000	4.0000	1.0000	3.0000	0.0000	3.0000
		0.0000	0.0000	2.0000	5.0000	4.0000	2.0000	2.0000	4.0000
		1.0000	3.0000	2.0000	6.0000	2.0000	0.0000	4.0000	3.0000
		4.0000	5.0000	7.0000	2.0000	7.0000	4.0000	2.0000	6.0000
		4.0000	1.0000	3.0000	6.0000	4.0000	1.0000	0.0000	0.0000
		4.0000	7.0000	4.0000	7.0000	0.0000	2.0000	1.0000	2.0000
		5.0000	4.0000	4.0000	3.0000	4.0000	0.0000	5.0000	6.0000
		1.0000	3.0000	2.0000	7.0000	4.0000	1.0000	6.0000	0.0000
		3.0000	3.0000						
	Extrinsic	0.0000	3.0000	1.0000	0.0000	0.0000	0.0000	6.0000	0.0000
		1.0000	6.0000	6.0000	3.0000	5.0000	4.0000	6.0000	1.0000
		6.0000	0.0000	2.0000	2.0000	0.0000	5.0000	5.0000	0.0000
		6.0000	3.0000	6.0000	2.0000	3.0000	6.0000	1.0000	1.0000
		3.0000	2.0000	1.0000	3.0000	0.0000	3.0000	4.0000	0.0000
		4.0000	2.0000	1.0000	2.0000	0.0000	3.0000	8.0000	8.0000
		0.0000	1.0000	2.0000	1.0000	3.0000	2.0000	7.0000	5.0000
		1.0000	4.0000	2.0000	0.0000	2.0000	6.0000	0.0000	1.0000
		5.0000	5.0000	4.0000	0.0000	0.0000	0.0000	0.0000	8.0000
		5.0000	4.0000						
	Intrinsic	0.0000	1.0000	0.0000	1.0000	3.0000	3.0000	1.0000	4.0000
		4.0000	0.0000	1.0000	1.0000	2.0000	1.0000	2.0000	0.0000
		2.0000	1.0000	4.0000	1.0000	2.0000	1.0000	0.0000	1.0000
		1.0000	2.0000	0.0000	0.0000	2.0000	1.0000	3.0000	3.0000
		1.0000	1.0000	0.0000	3.0000	1.0000	1.0000	1.0000	0.0000
		0.0000	1.0000	0.0000	0.0000	2.0000	3.0000	0.0000	0.0000
		3.0000	0.0000	2.0000	0.0000	1.0000	4.0000	0.0000	1.0000
		2.0000	0.0000	2.0000	0.0000	2.0000	1.0000	2.0000	1.0000
		1.0000	0.0000	2.0000	0.0000	1.0000	1.0000	0.0000	0.0000
		0.0000	1.0000						

# APPENDIX II-G

Individual scores on the 2 Yielding Cognitive Process Categories by each of the 83 subjects on the 'Should do' measure of the JHTST.

Cognitive Process Category									
	Extrinsic								
	5.0000	0.0000	2.0000	0.0000	0.0000	0.0000	1.0000	0.0000	1.0000
	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	3.0000	5.0000
	0.0000	7.0000	0.0000	0.0000	2.0000	0.0000	1.0000	3.0000	0.0000
	0.0000	0.0000	0.0000	0.0000	1.0000	1.0000	0.0000	1.0000	3.0000
	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	1.0000	2.0000	1.0000
	0.0000	4.0000	4.0000	0.0000	2.0000	1.0000	0.0000	0.0000	3.0000
	1.0000	0.0000	0.0000	0.0000	2.0000	0.0000	0.0000	0.0000	0.0000
	0.0000	0.0000	0.0000	4.0000	0.0000	0.0000	1.0000	0.0000	4.0000
	1.0000	0.0000	0.0000	1.0000	3.0000	5.0000	2.0000	0.0000	0.0000
	0.0000	0.0000							
	0.0000	0.0000	0.0000	0.0000	0.0000	1.0000	0.0000	0.0000	0.0000
	0.0000	1.0000	0.0000	0.0000	0.0000	0.0000	0.0000	1.0000	1.0000
	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	1.0000
	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	1.0000
	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	1.0000
	0.0000	0.0000	0.0000	0.0000	2.0000	0.0000	0.0000	0.0000	0.0000
	0.0000	0.0000	0.0000	0.0000	0.0000	1.0000	0.0000	0.0000	1.0000
	0.0000	0.0000	0.0000	0.0000	0.0000	1.0000	0.0000	0.0000	1.0000
	0.0000	0.0000							

APPENDIX II-H

Analysis of variance of Yielding scores on the 2 measures of the JHTST ('did do' and 'should do') and 2 levels of cognitive processes (extrinsic, intrinsic).

	DF	MS	F
'Did do' and 'should do' measures tested against measures x subject variance.	1	258.58	108.64*
	82	2.38	
2 levels of cognitive processes	1	379.59	215.92*
Interaction between the 2 measures and 2 levels of cognitive processes	1	152.48	78.02*
Tested against measures x cognitive level x subject variance	82	1.95	

\*  $p < .01$

Means for Measures and Cognitive Levels

		Cognitive Levels	
		Extrinsic	Intrinsic
Measures	'Did do'	4.06	0.57
	'Should do'	0.94	0.16

APPENDIX II-I

Analysis of variance of Resistance scores, on the 2 measures of the JHTST ('did do' and 'should do') and 3 levels of cognitive processes (right/wrong, extrinsic, intrinsic) with planned contrasts.

	DF	MS	F
'Did do' and 'Should do' measures tested against measures x subject variance	1	173.57	106.66*
	82	1.62	
3 levels of cognitive processes	2	104.35	29.92*
Contrast of right/wrong to extrinsic	1	35.79	26.92*
Contrast of extrinsic to intrinsic	1	70.51	18.19*
Contrast of right/wrong to intrinsic	1	206.76	53.34*
Tested against cognitive level x subject variance	164	3.87	
Interaction between the 2 measures and 3 levels of cognitive processes	2	10.88	3.55*
Interaction between the 2 measures and 2 levels, contrasting right/wrong to extrinsic	1	5.06	1.65
Interaction between the 2 measures and 2 levels, contrasting extrinsic to intrinsic	1	21.76	7.09*
Interaction between the 2 measures and 2 levels, contrasting right/wrong to intrinsic	1	5.83	1.90
Tested against measures x cognitive level x subject variance	164	3.07	

\*  $p < .05$

Means for Measures and Cognitive Levels

		Cognitive Levels		
Measures		Right/Wrong	Extrinsic	Intrinsic
	'Did do'	1.86	0.95	0.54
	'Should do'	3.05	2.64	1.20

APPENDIX III

A - E



APPENDIX III-A

## GENERAL INSTRUCTION PROGRAM : TEMPTATION TO STEAL STORIES

Lollies in Jar at the Shop

Bill/Jill walked into the shop and saw the big jar of lollies on the counter. Bill/Jill had only just enough money to buy his/her father's pipe tobacco. But Bill/Jill had walked a long way to get to the shop and now s/he really felt like a few lollies. S/he noticed that the lady in the shop was very busy putting things away on the shelves. S/he thought 'If I quickly put my hand in the jar and took some lollies she would never know. Then when she turned around I could buy my father his pipe tobacco.

Beach Ball

Rob/Sally saw a beach ball in the back of a small boat. S/he could see that the owner of the ball was busy playing. Bob/Sally thought that it would be great to have a beach ball just like that one to play with. S/he knew that it would be easy to take the ball without being seen!

Yo-Yo Story

Joe/Neil was walking along the path to school when s/he saw a yo-yo fall out of the pocket of the boy in front of him/her. Joe/Neil remembered that today was the day when everyone was supposed to bring their yo-yo's to school. Joe/Neil had forgotten, but by taking this one s/he would still be able to play with all the other children. S/he wondered what to do.

Money on the Table at a Friends' House

Tim/Fran's mother took him/her over to her friend's house for afternoon tea. They arrived at 3 p.m. and all had a nice cup of tea and some chocolate biscuits. At about 4 p.m. Tim/Fran started to get bored with his/her mother talking to her friend and began wandering around the house. S/he came back into the room where his/her mother was talking. S/he could see that they had not noticed him/her. Then all of a sudden s/he saw the money on the table. S/he thought 'If I take it my mother's friend will probably never know it was me that took it'.

### Money in the Car

Bill/Sue was walking past a car when s/he noticed some money on the back seat of the car. Bill/Sue quickly looked around to see if there was anybody near the car. There wasn't. Bill/Sue thought that the money was just enough to buy the special toy s/he had always wanted. S/he looked hard at the money and wondered what s/he should do.

### Bike Pump

Jack/Jill looked at the bike with special interest. The bike had a bright new shiny pump on it. Jack/Jill had broken his/her pump yesterday and really wanted a new one. S/he could not see anyone close to the bike area. S/he thought to himself/herself, 'If I take the pump I will be able to go for a ride on my bike today'.

### Toy in a Friend's House

Jeff/Sue was playing in his/her friend's home. They were having a great time. They had played with the train set and lots of other games as well. Jeff/Sue was playing hide and seek and had raced into another room where s/he thought his/her friend would not look. While s/he was in the room he saw a toy that s/he thought would be fantastic to own. S/he looked at the toy and wondered if s/he should take it and race home.

### Money in Sue's Bag

John/Jean opened the door to the room where the school bags are kept. S/he looked at Sue's bag and saw two \$1 notes sticking out of her bag. John/Jean thought to himself/herself that if s/he took the money s/he could buy some lollies with the money.

### Cake in the Shop

Max/Jane strolled into the shop to have a look at the new games that they were selling. But the first thing to catch his/her eye was the cake sitting on the counter. It looked mouth watering and Max/Jane was sure that s/he could not resist having a closer look. The lady in the shop was not watching him/her. Max/Jane was tempted to take a slice.

Sneaking into Theatre

Joe/Jane saw the line to get into the pictures. S/he knew that s/he did not have enough money to buy a ticket. But s/he really wanted to see the picture. All his/her friends would see it and talk about it at school. Joe/Jane felt quite upset, and then happened to see that the door into the pictures was open. S/he thought about sneaking in without saying!

The above situations were also used in the DIP group with the exception that the subject was the principal character in each situation.

APPENDIX III-B

## GENERAL INSTRUCTION PROGRAM : ISSUES AND PROBES

The following probes were presented to each child after every temptation to steal story.

<u>ISSUE</u>	<u>PROBE</u>
<i>Initial Reaction</i>	1. What do you think ..... did? (If relevant answer) Did s/he take it or not?
	2. Why do you think s/he did that?
<i>General Reference</i>	3. Do most people ..... things that they want?
<i>Friend vs Stranger</i>	4. If ..... did not know who owned the .... do you think s/he would do the same thing?
	5. Is there a difference between stealing from a friend and a stranger? What is the difference? Why should that be important?
<i>Model's Behaviour</i>	6. Do you think that a friend of yours would steal from you, or from anyone? Why/why not?
<i>Reaction to Model</i>	7. If you found out that a friend of yours did steal something would you still be his/her friend? Why/why not?
<i>Parent Reaction</i>	8. What do you think ..... mother might say if she found out s/he had .....
	9. What do you think would happen to him/her then?
<i>Parent vs Child Status</i>	10. If ..... parents had talked about taking things from the office at work do you think they would punish ..... Why/why not?
<i>Lack of Detection</i>	11. Is is OK for ..... if there is no chance of his/her mum or dad finding out? Why/why not?
<i>Headmaster/ Headmistress Reaction</i>	12. What do you think the headmaster/headmistress would do to ..... if s/he found out s/he ..... Why?

*School  
Friends  
Reaction*

13. What do you think the other boys and girls at school would do when they found out that .....? Why?

*Law*

14. The law is made up of rules. One rule says that it is not right to steal. Do you think that it is a good rule? Why/why not?

15. If ..... broke the rule and .... does s/he deserve to be punished? Why/why not?

*Penalty*

16. What should be ..... punishment if s/he .....?

*Need and  
Punishment*

17. Should the punishment depend on how badly .... money? Why/why not?

*Feelings*

18. How do you think ..... would feel if ..... took her .....? Why?

*Wealthy  
Owner*

19. Suppose ..... (had lots of money). Do you think that would make it alright for .....? Why/why not?

*Poverty  
of  
Thief*

20. Suppose ..... came from a very poor family and was never given pocket money. Do you think it would be alright for .....? Why/why not?

*Share  
Money*

21. If ..... was going to share ..... friend, would that make it alright for him/her to .....? Why/why not?

APPENDIX III-C

## THE CONCEPT ASSESSMENT/TRAINING SESSION

InstructionsOWNERSHIP

(A) Card Sorting: Take 2 cards, E writes his/her name on 1 card and gets C to write his/her name on the other card. Then E takes 3 cards and draws a picture on each card. A 20¢ piece, on one, an apple on another, and a pencil on the last. E then gets C to do the same drawings.

E gathers all the drawings and asks C to sort them under the correct name label. E keeps asking C to keep doing this until C makes 3 successful sorts. E should change the order of the name labels at the end of each trial.

(B) E then introduces 2 new cards with YOURS on 1 and MINE on the other. E gives C practice in saying these words. E adds BEING FAIR means you say, "I can keep mine but cannot take yours. That's treating the other person as you would like to be treated". When C can say this satisfactorily E then repeats the process as in (A) above.

(c) Introduce 2 more cards. Write OWN on 1 and DO NOT OWN on 2. Repeat process as in (A) and (B) above. Also discuss OWNER.

T.P.S.

(A) E says to C stealing is taking something without asking the owner.

E takes out 2 boxes and labels box 1 with E's name and box 2 with C's. E puts a jelly bean in E's box and says to C, "Do you want that?" E then says, "If I turned away and you really wanted that jelly bean, you would get excited - you could probably feel your belly getting excited - and then you would say to yourself, "Will I take it or not?" If you did take it what would you be doing? Give C 5 seconds to respond and then

say, "If you take something without asking the owner you are - stealing". Say, "stealing is taking something without asking the owner". What is stealing? Get C to say after you what stealing is.

(B) Repeat as in (A) with 2 more examples using a watch and a pen.

(C) E says, "How do you think you could get the pen without taking it?" Give C 5 seconds to respond then say, "You could ask the owner could you have it, or you could ask a friend or your parents could you borrow or have a lend of some money so you could buy a pen, or you could save the money up, or you could do some jobs and earn the money for the pen. Let's go over those ways you can get something without taking it. First, the jelly bean, then the watch, then the pen."

(D) Complete the instruction given in (C).

APPENDIX III-D

## DIRECT INSTRUCTION PROGRAM

TRAINING SEQUENCE A

Make yourself comfortable. Good.

*Slide of Temptation Problem Situation thrown onto screen and the story related to the child.*

The boy/girl in the picture is YOU.

So there you are in the picture - you are looking hard at the (state the object) that you want very much and say, "Will I take it or not?". You say out loud, "Will I take it or not?"

Now before you decide, say THINK.

- *Slide change*

You say out loud after me THINK

- *Slide change*

Think about the owner and say BE FAIR. You say out loud after me BE FAIR. Yes, you should BE FAIR. Being fair means saying to yourself, "I can keep what is mine but cannot take yours". By saying that, you are following the RULE of treating others as you would like to be treated. Now you say after me out loud (go slowly), "I will treat others as I would like to be treated". Good. After all you would not like other people to take things that belong to you. So BE FAIR and treat others as you would like to be treated.

- *Slide change*

- *TPS* - Here you are looking back at ----- that you want very much. Now you make your decision.

Did you take it or not?

If you did take it - press the YES button - that's the green one.

If you did not take it - press the NO button - that's the red one.

PRESS NOW.



NO Choice

- *Slide change*

THINK

Say out loud after me THINK

- *Slide change*

Think about BEING FAIR to the owner. Say out loud after me  
BE FAIR.

Because you were fair to the owner and did not take the owner's  
things - that has made the owner happy.

By treating the owner as you would like to be treated - you have  
made the owner happy.

That's good!

- *Slide change*

By BEING FAIR to the owner you have also made yourself happy.

By treating the other person as you would like to be treated -  
you feel good.

Say BEING FAIR feels good.

- *Slide change*

Can you think of another way to get what you want without taking  
it?

- *Slide change*

I will try another way

Say out loud after me, "I will try another way".

Here are some ways you could get what you want without taking it.

Point to the way you would like to try. Keep pointing to it -  
and I will check so you can actually do it.

*EXIT*

*Experimenter checks the child's choice and then sets up the  
appropriate situation so that this child can act it out.*

YES Choice

- *Slide change x 6*

THINK

Say out loud after me THINK

- *Slide change*

Think about not BEING FAIR to the owner. Say out loud, "I am not BEING FAIR". Because you were not fair to the owner and took what belonged to the owner you have made the owner unhappy.

By NOT treating the owner as you would like to be treated you have made the owner unhappy. That is not BEING FAIR.

- *Slide change*

By not BEING FAIR to the owner you have also made yourself unhappy. By NOT treating the other person as you would like to be treated you feel unhappy. Not BEING FAIR does not make you happy.

- *Slide change*

Try again

*Slide change*

There you are in the picture.

You are looking hard at what you want very much and say "Will I take it or not?". Say out loud after me, "Will I take it or not?". Now before you decide say : THINK.

- *Slide change*

Say THINK out loud now.

- *Slide change*

THINK about the owner and say BE FAIR.

You say out loud after me BE FAIR.

Yes, you should BE FAIR. Being fair means saying to yourself, "I can keep what is mine but cannot take yours". By saying that you are following the RULE of treating others as you would like

to be treated.

Now you say out loud after me (*go slowly*) "I will treat others as I would like to be treated". Good. After all you would not like other people to take things that belong to you. So BE FAIR and treat others as you would like to be treated.

- *Slide change*

- *TPS* - Here you are looking back at ----- that you want very much. Now you make your decision.

Did you take it or not?

If you did take it - press the YES button - that's the green one.

If you did not take it - press the NO button - that's the red one.

PRESS NOW.

### NO Choice

- *Slide change*

Say THINK

Say THINK out loud now

- *Slide change*

THINK about BEING FAIR to the owner. Say out loud after me  
BE FAIR.

Because you were fair to the owner and did not take his things

- that has made him happy. By treating the owner as you would like to be treated - you have made the owner happy.

That's good!

- *Slide change*

By BEING FAIR to the owner you have also made yourself happy.

By treating the other person as you would like to be treated - you feel good. BEING FAIR feels good.

- *Slide change*

Can you THINK of another way to get what you want without taking it?

- *Slide change*

"I will try another way"

Say out loud after me, "I will try another way"

Here are some ways you could get what you want without taking it.

Point to the way you would like to try. Keep pointing to it

- and I will check so you can actually do it.

#### EXIT

*Experimenter checks the child's choice and then sets up the appropriate situation so that this child can act it out.*

#### YES Choice

- *Slide change*

THINK

Say out loud after me THINK

- *Slide change*

Think about not BEING FAIR to the owner. Say out loud, "I am not being fair". Because you were not fair to the owner and took what belonged to the owner you have made the owner unhappy. By NOT treating the owner as you would like to be treated you have made the owner unhappy. That's not BEING FAIR.

- *Slide change*

By NOT BEING FAIR to the owner you have also made yourself unhappy. By NOT treating the other person as you would like to be treated you feel unhappy. NOT BEING FAIR does not make you happy.

- *Slide change*

Try Again

- *Slide change*

There you are in the picture.

You are looking hard at what you want very much and say, "Will I take it or not?". Say out loud after me, "Will I take it or not?"

Now before you decide say : THINK.

- *Slide change*

Say THINK out loud now

- *Slide change*

THINK about the owner and say BE FAIR

You say out loud after me BE FAIR

Yes, you should BE FAIR. Being fair means saying to yourself, "I can keep what is mine but cannot take yours". By saying that you are following the RULE of treating others as you would like to be treated. Now you say out loud after me (*go slowly*) "I will treat others as I would like to be treated". Good.

After all you would not like other people to take things that belong to you. So BE FAIR and treat others as you would like to be treated.

- *Slide change*

- *TPS* - There you are looking back at ----- what you want very much.

This time decide not to take it. Press the NO button. That's the red one.

PRESS NOW!

### NO Choice

- *Slide change*

Say THINK

Say THINK out loud now

- *Slide change*

THINK about BEING FAIR to the owner. Say out loud after me BE FAIR. Because you were fair to the owner and did not take

his things - that has made him happy. By treating the owner as you would like to be treated - you have made the owner happy.

That's good!

- *Slide change*

By BEING FAIR to the owner you have also made yourself happy. By treating the other person as you would like to be treated - you feel good. BEING FAIR feels good.

- *Slide change*

Can you THINK of another way to get what you want without taking it?

- *Slide change*

"I will try another way"

Say out loud after me, "I will try another way".

Here are some ways you could get what you want without taking it.

Point to the way you would like to try. Keep pointing to it  
- and I will check so you can actually do it.

#### EXIT

*Experimenter checks the child's choice and then sets up the appropriate situation so that this child can act it out.*

APPENDIX III-D

(continued)

TRAINING SEQUENCE B

Make yourself comfortable. Good.

- *Slide of Temptation Problem Situation thrown onto screen and the story related to the child.*

The boy/girl in the picture is YOU.

So there you are in the picture - you are looking hard at the (*state the object*) that you want very much and say, "Will I take it or not?". You finish these words, "Will I ta-- it or no-".

Now before you decide, say : THINK.

- *Slide change*

You finish this word THIN- (*pause*)

- *Slide change*

Think about the owner and say BE FAIR. Say "BE FA--". Yes, you should BE FAIR. Being fair means saying to yourself, "I can keep what is mine but cannot take yours". By saying that, you are following the RULE of treating others as you would like to be treated. You finish these words: "I will trea- others as I would like to be trea---)". Good. After all you would not like other people to take things that belong to you. So BE FAIR and treat others as you would like to be treated.

- *Slide change*

- *TPS* - Here you are looking back at ----- that you want very much. Now you make your decision.

Did you take it or not?

If you did take it - press the YES button - that's the green one.

If you did not take it - press the NO button - that's the red one.

PRESS NOW!

NO Choice

- *Slide change*

THIN-

- *Slide change*

Because you were fair to the owner and did not take the owner's things - that has made the owner happy.

By treating the owner as you would like to be treated - you have made the owner happy.

That's good!

- *Slide change*

By BEING FAIR to the owner you have also made yourself happy.

By treating the other person as you would like to be treated - you feel good. BEING FAIR feels good.

- *Slide change*

Can you THINK of another way to get what you want without taking it?

- *Slide change*

"I will try another way"

You finish these words, "I will tr- another w--".

Here are some ways you could get what you want without taking it.

Point to the way you would like to try. Keep pointing to it - and I will check so you can actually do it.

EXIT

*Experimenter checks the child's choice and then sets up the appropriate situation so that this child can act it out.*



YES Choice

- *Slide change x 6*

THINK

You finish this word : THIN-

- *Slide change*

Think about not BEING FAIR to the owner.

Because you were not fair to the owner and took what belonged to the owner you have made the owner unhappy.

By not treating the owner as you would like to be treated you have made the owner unhappy. That is not BEING FAIR.

- *Slide change*

By not BEING FAIR to the owner you have also made yourself unhappy. By NOT treating the other person as you would like to be treated you feel unhappy. NOT BEING FAIR does not make you happy.

- *Slide change*

Try again

- *Slide change*

There you are in the picture.

You are looking hard and what you want very much and say, "Will I take it or not?". You finish these words, "Will I ta-- it or no-?"

Now before you decide say : THINK.

- *Slide change*

You finish this word: THIN-

- *Slide change*

THINK about the owner and say BE FAIR.

You finish these words, "BE FA--".

Yes, you should BE FAIR. Being fair means saying to yourself "I can keep what is mine but cannot take yours". By saying that you are following the RULE of treating others as you would like

to be treated. You finish these words, "I will treat others as I would like to be treated---". Good. After all you would not like other people to take things that belong to you. So BE FAIR and treat others as you would like to be treated.

- *Slide change*

- *TPS* - Here you are looking back at ----- that you want very much. Now you make your decision.

Did you take it or not?

If you did take it - press the YES button - that's the green one

If you did not take it - press the NO button - that's the red one.

PRESS NOW!

### NO Choice

- *Slide change*

Say THINK. You finish this word THIN-

- *Slide change*

THINK about BEING FAIR to the owner. You finish these words BE FA--. Because you were fair to the owner and did not take his things - that has made him happy. By treating the owner as you would like to be treated - you have made the owner happy.

That's good!

- *Slide change*

By BEING FAIR to the owner you have also made yourself happy. By treating the other person as you would like to be treated - you feel good. BEING FAIR feels good.

- *Slide change*

"I will try another way"

You finish these words "I will try another way--".

Here are some ways you could get what you want without taking it. Point to the way you would like to try. Keep pointing to it - and I will check so you can actually do it.

### EXIT

*Experimenter checks the child's choice and then sets up the appropriate situation so that this child can act it out.*

YES Choice

- *Slide change x 6*

THINK. You finish this word: THIN-

- *Slide change*

Think about not BEING FAIR to the owner. You finish these words, "I am not BEING FA--". Because you were unfair to the owner and took what belonged to the owner you have made the owner unhappy. By NOT treating the owner as you would like to be treated you have made the owner unhappy. That is not BEING FAIR.

- *Slide change*

By NOT BEING FAIR to the owner you have also made yourself unhappy. By NOT treating the other person as you would like to be treated you feel unhappy. NOT BEING FAIR does not make you happy.

- *Slide change*

Try again

- *Slide change*

There you are in the picture.

You are looking hard at what you want very much and say "Will I take it or not?". You finish these words, "Will I ta-- it or no-?" Now before you decide say: THINK

- *Slide change*

You finish this word: THIN-

- *Slide change*

THINK about the owner and say BE FAIR

You finish these words: BE FA--

Yes, you should BE FAIR. Being fair means saying to yourself, "I can keep what is mine but cannot take yours". By saying that you are following the RULE of treating others as you would like to be treated. You finish these words, "I will trea- others as I would like to be trea---". Good. After all you would not like other people to take things that belong to you. So BE FAIR and treat others as you would like to be treated.

- *Slide change*

- *TPS* - There you are looking back at ~~xxxxxxxxxxxx~~ what you want very much.

This time decide not to take it. Press the NO button. That's the red one.

PRESS NOW!

### NO Choice

- *Slide change*

Say THINK. You finish this word: THIN-.

- *Slide change*

THINK about not BEING FAIR to the owner.

Because you were fair to the owner and did not take his things - that has made him happy. By treating the owner as you would like to be treated - you have made the owner happy.

That's good!

- *Slide change*

By BEING FAIR to the owner you have also made yourself happy.

By treating the other person as you would like to be treated - you feel good. BEING FAIR feels good.

- *Slide change*

Can you THINK of another way to get what you want without taking it?

- *Slide change*

I will try another way

You finish these words: "I will tr- another w--

Here are some ways you could get what you want without taking it.

Point to the way you would like to try. Keep pointing to it - and I will check so you can actually do it.

### *EXIT*

*Experimenter checks the child's choice and then sets up the appropriate situation so that this child can act it out.*

APPENDIX III-D  
(continued)

TRAINING SEQUENCE C

Make yourself comfortable. Good.

*Slide of Temptation Problem Situation thrown onto screen and the story related to the child.*

The boy/girl in the picture is YOU.

So there you are in the picture - you are looking hard at what you want very much and say, "Will I take it or not?"

You finish these words, "Will I t--- it or n--?" Now before you decide say: THINK

- *Slide change*

You finish this word: TH---

- *Slide change*

THINK about the owner and say BE FAIR. "BE FA--". Yes, you should BE FAIR. Being fair means saying to yourself "I can keep what is mine but cannot take yours." By saying that, you are following the RULE of treating others as you would like to be treated. You finish these words: "I will tr--- others as I would like to be tr-----". Good. After all you would not like other people to take things that belong to you. so BE FAIR and treat others as you would like to be treated.

- *Slide change*

- *TPS* - Here you are looking back at ----- what you want very much. Now you make your decision.

Did you take it or not?

If you did take it - press the YES button - that's the green one.

If you did not take it - press the NO button - that's the red one.

PRESS NOW!

NO Choice

- *Slide change*

THINK

- *Slide change*

Because you were fair to the owner and did not take the owner's things - that has made the owner happy.

By treating the owner as you would like to be treated - you have made the owner happy.

That's good.

- *Slide change*

By BEING FAIR to the owner you have also made yourself happy.

By treating the other person as you would like to be treated - you feel good. BEING FAIR feels good.

- *Slide change*

Can you THINK of another way to get what you want without taking it?

- *Slide change*

"I will try another way". You say the missing words: "I will --- another ---".

Here are some ways you could get what you want without taking it. Point to the way you would like to try. Keep pointing to it - and I will check so you can actually do it.

*EXIT*

*Experimenter checks the child's choice and then sets up the appropriate situation so that this child can act it out.*

YES Choice

- *Slide change x 6*

THINK. You finish this word: TH---

- *Slide change*

Think about not BEING FAIR to the owner.

Because you were not fair to the owner and took what belonged to the owner you have made the owner unhappy.

By NOT treating the owner as you would like to be treated you have made the owner unhappy. That's not BEING FAIR.

- *Slide change*

By not BEING FAIR to the owner you have also made yourself unhappy. By NOT treating the other person as you would like to be treated you feel unhappy. NOT BEING FAIR does not make you happy.

- *Slide change*

Try again

- *Slide change*

There you are in the picture.

You are looking hard at what you want very much and say, "Will I take it or not?". You finish these words: "Will I t--- it or n--?" Now before you decide say: THINK

- *Slide change*

You finish this word: TH---.

- *Slide change*

THINK about the owner and say BE FAIR

You finish these words: "BE F---". Yes, you should BE FAIR.

Being fair means saying to yourself, "I can keep what is mine but cannot take yours". By saying that you are following the RULE of treating others as you would like to be treated.

You finish these words: "I will tr--- others as I would like to be tr-----". Good. After all you would not like other people to

take things that belong to you. So BE FAIR and treat others as you would like to be treated.

- *Slide change*

- *TPS* - Here you are looking back at -----

what you want very much. Now you make your decision.

Did you take it or not?

If you did take it - press the YES button - that's the green one.

If you did not take it - press the NO button - that's the red one.

PRESS NOW!

### NO Choice

- *Slide change*

Say: THINK. You finish this word: "TH---"

- *Slide change*

THINK about BEING FAIR to the owner. You finish these words:

"BE F---". Because you were fair to the owner and did not take his things - that has made him happy. By treating the owner as you would like to be treated - you have made the owner happy.

That's good!

- *Slide change*

By BEING FAIR to the owner you have also made yourself happy.

By treating the other person as you would like to be treated - you feel good. BEING FAIR feels good.

- *Slide change*

Can you THINK of another way to get what you want without taking it?

- *Slide change*

"I will try another way"

You say the missing words "I will --- another --- .

Here are some ways you could get what you want without taking it.



Point to the way you would like to try. Keep pointing to it  
- and I will check so you can actually do it.

*EXIT*

*Experimenter checks the child's choice and then sets up the appropriate situation so that this child can act it out.*

YES Choice

- *Slide change*

THINK. You finish this word: TH--- .

- *Slide change*

Think about not BEING FAIR to the owner. You finish these words, "I am not being f---". Because you were not fair to the owner and took what belonged to the owner you have made the owner unhappy. By NOT treating the owner as you would like to be treated you have made the owner unhappy. That's NOT BEING FAIR.

- *Slide change*

By not BEING FAIR to the owner you have also made yourself unhappy. By NOT treating the other person as you would like to be treated you feel unhappy. NOT BEING FAIR does not make you happy.

- *Slide change*

Try again.

- *Slide change*

There you are in the picture.

You are looking hard at what you want very much and say, "Will I take it or not?". You finish these words: "Will I t--- it or n--". Now before you decide say: THINK.

- *Slide change*

You finish this word: TH--- .

- *Slide change*

THINK about the owner and say: BE FAIR. You finish these words: "BE F---". Yes, you should BE FAIR. Being fair means saying to yourself, "I can keep what is mine but cannot take yours". By saying that you are following the RULE of treating others as you would like to be treated. You finish these words, "I will tr--- others as I would like to be tr-----". Good. After all you would not like other people to take things that belong to you. So BE FAIR and treat others as you would like to be treated.

- *Slide change*

- *TPS* - There you are looking back at ----- what you want very much.

This time decide not to take it. Press the NO button. That's the red one.

PRESS NOW!

### NO Choice

- *Slide change*

Say THINK. You finish this word: "TH---".

- *Slide change*

THINK about BEING FAIR to the owner.

Because you were fair to the owner and did not take his things - that has made him happy. By treating the owner as you would like to be treated - you have made the owner happy. That's good!

- *Slide change*

By BEING FAIR to the owner you have also made yourself happy. By treating the other person as you would like to be treated - you feel good. BEING FAIR feels good.

- *Slide change*

Can you THINK of another way to get what you want without taking it?

- *Slide change*

"I will try another way".

You say the missing words: "I will --- another ---".

Here are some ways you could get what you want without taking it.

Point to the way you would like to try. Keep pointing to it -  
and I will check so you can actually do it.

*EXIT*

*Experimenter checks the child's choice and then sets up the  
appropriate situation so that this child can act it out.*

APPENDIX III-D

(continued)

## DIRECT INSTRUCTION PROGRAM

TRAINING SEQUENCE D

Make yourself comfortable. Good.

The boy/girl in the picture is YOU.

So there you are in the picture - you are looking hard at what you want very much and say , "Will I take it or not?"

What do you say?

Now before you decide, say : THINK

- *Slide change*

What do you say?

- *Slide change*

Think about the owner and say BE FAIR. What do you say?

Yes, you should BE FAIR. Being fair means saying to yourself, "I can keep what is mine but cannot take yours." By saying that, you are following the RULE of treating others as you would like to be treated. What is the RULE? What does it mean?

Good. After all you would not like other people to take things that belong to you. So BE FAIR and treat others as you would like to be treated.

- *Slide change*

- *TPS* - Here you are looking back at ----- what you want very much<sup>\*</sup>. Now you make your decision.

Did you take it or not?

If you did take it - press the YES button - that's the green one.

If you did not take it - press the NO button - that's the red one.

PRESS NOW!

NO Choice

THINK

What do you say?

Because you were fair to the owner and did not take the owner's things that has made the owner happy.

By treating the owner as you would like to be treated - you have made the owner happy.

That's good!

By BEING FAIR to the owner you have also made yourself happy.

By treating the other person as you would like to be treated - you feel good. BEING FAIR feels good.

Can you THINK of another way to get what you want without taking it?

"I will try another way"

What do you say?

Here are some ways you could get what you want without taking it.

Point to the way you would like to try. Keep pointing to it - and I will check so you can actually do it.

*EXIT*

*Experimenter checks the child's choice and then sets up the appropriate situation so that this child can act it out.*

YES Choice

- *Slide change x 6*

THINK

What do you say?

- *Slide change*

Think about not BEING FAIR to the owner. Are you being fair taking it? What do you say?

Because you were not fair to the owner and took what belonged to the owner you have made the owner unhappy.

By NOT treating the owner as you would like to be treated you have made the owner unhappy. That's not being fair.

- *Slide change*

By not BEING FAIR to the owner you have also made yourself unhappy.

By NOT treating the other person as you would like to be treated you feel unhappy. NOT BEING FAIR does not make you happy.

- *Slide change*

Try again

- *Slide change*

There you are in the picture.

You are looking hard at what you want very much and say, "Will I take it or not?" What do you say?

Now before you decide say : THINK

- *Slide change*

What do you say?

- *Slide change*

THINK about the owner and say: BE FAIR. What do you say.

Yes, you should BE FAIR. Being fair means saying to yourself, "I can keep what is mine but cannot take yours". By saying that you are following the RULE of treating others as you would like to be treated.

What is the rule? Good. After all you would not like other people to take things that belong to you. So BE FAIR and treat others as you would like to be treated.

- *Slide change*

- *TPS* - Here you are looking back at ----- what you want very much. Now you make your decision.

Did you take it or not?

If you did take it - press the YES button - that's the green one.

If you did not take it - press the NO button - that's the red one.

PRESS NOW!

### NO Choice

- *Slide change*

Say THINK

What do you say?

- *Slide change*

THINK about BEING FAIR to the owner. Are you being fair not taking it? What do you say?

Because you were fair to the owner and did not take his things - that has made him happy. By treating the owner as you would like to be treated - you have made the owner happy.

That's good!

- *Slide change*

By BEING FAIR to the owner you have also made yourself happy.

By treating the other person as you would like to be treated - you feel good. BEING FAIR feels good.

- *Slide change*

Can you THINK of another way to get what you want without taking it?

- *Slide change*

"I will try another way"

What do you say?

Here are some ways you could get what you want without taking it.

Point to the way you would like to try. Keep pointing to it - and I will check so you can actually do it.

## EXIT

*Experimenter checks the child's choice and then sets up the appropriate situation so that this child can act it out.*

YES Choice

*- Slide change x 6*

THINK

What do you say?

*- Slide change*

Think about not BEING FAIR to the owner. Are you being fair?

What do you say?

Because you were not fair to the owner and took what belonged to the owner - you have made the owner unhappy.

By NOT treating the owner as you would like to be treated you have made the owner unhappy. That's not BEING FAIR.

*- Slide change*

By NOT BEING FAIR to the owner you have also made yourself unhappy.

By NOT treating the other person as you would like to be treated you feel unhappy. NOT BEING FAIR does not make you happy.

*- Slide change*

Try again

*- Slide change*

There you are in the picture.

You are looking hard at what you want very much and say, "Will I take it or not?". What do you say?

Now before you decide, say : THINK.

*- Slide change*

What do you say?

*- Slide change*

THINK about the owner and say BE FAIR. What do you say?



Yes, you should BE FAIR. Being fair means saying to yourself, "I can keep what is mine but cannot take yours". By saying that you are following the RULE of treating others as you would like to be treated.

What is the rule? Good. After all you would not like other people to take things that belong to you. So BE FAIR and treat others as you would like to be treated.

- *Slide change*

- *TPS* - There you are looking back at ----- what you want very much.

This time decide not to take it. Press the NO button. That's the red one.

PRESS NOW!

#### NO Choice

- *Slide change*

Say THINK

What do you say?

- *Slide change*

THINK about BEING FAIR to the owner. Are you being fair not taking it? What do you say?

Because you were fair to the owner and did not take his things - that has made him happy. By treating the owner as you would like to be treated - you have made the owner happy.

That's good!

- *Slide change*

By BEING FAIR to the owner you have also made yourself happy.

By treating the other person as you would like to be treated - you feel good. BEING FAIR feels good.

- *Slide change*

Can you THINK of another way to get what you want without taking it?

- *Slide change*

"I will try another way".

What do you say?

Here are some ways you could get what you want without taking it?

Point to the way you would like to try. Keep pointing to it - and I will check so you can actually do it.

*EXIT*

*Experimenter checks the child's choice and then sets up the appropriate situation so that this child can act it out.*

APPENDIX III-E

## LEGITIMATE ALTERNATIVE TRAINING

Point to the alternative you would like to try.

SAVING

Say to the child: "Now you act out your way of getting the eg. cake without taking it.

By taking this money and putting it in your piggy bank you are saving up so that you can buy the cake when you save enough money.

Pick up the money and move yourself - that's you - see your name there - and put the money in the piggy bank"

Say: "I won't take it I will save up and buy it one day".

Now you say: "I won't take it I will save up and buy it one day".

COLLECTING BOTTLES

Say to the child: "Now you act out your way of getting the eg. yo-yo without taking it"

By taking these bottles to the shop you may get enough money so that you can buy a yo-yo. Pick up the bottles and move yourself - that's you - see your name there - and give the bottles to the shopkeeper - that's FRED. Good.

Say, "I won't take it I will give these bottles to the shopkeeper so that I may have enough money to buy a yo-yo."

Now you say: "I won't take it I will give these bottles to the shopkeeper so that I may have enough money to buy a yo-yo".

ASKING FOR A LOAN

Say to the child: "Now you act out the way of getting the eg. lollies without taking them. By asking dad, or mother or even a friend who will give you a loan of some money you can then buy the lollies.

Remember when you ask for a loan it means if you get the loan you can buy what you want but you **MUST** pay the money back to whoever you borrow it from, OK?

Move yourself - that's you - see your name there - and ask mum/dad/friend for a loan of some money so you can buy the lollies. Good!

Say: "I won't take the lollies I will ask mum/dad/friend for a loan of some money so I can buy some eg. lollies"

Now you say: "I won't take the lollies I will ask mum/dad/friend for a loan of some money so I can buy some eg. lollies."

ODD JOBS

Say to the child: "Now you act out your way of getting the eg. pump without taking it.

By mowing this lawn (green sheet of paper) you can earn some money so that you may be able to buy a pump. Pick up the lawn mower yourself - that's you - see your name there - and push it along the lawn a few times. Good!

Say: "I won't take the pump I will do some jobs like mowing the lawn to get the money so I can buy a pump".

Now you say: "I won't take the pump I will do some jobs like mowing the lawn to get the money so I can buy a pump".

APPENDIX IV

A - R

APPENDIX IV-A

Individual and group mean pre- post- and follow-up treatment resistance scores for subjects on the 'Did do' measure of the JHTST.

Subject	DIP Group			GIP Group		No Treatment Control Group		Post Only Control Group
	Pre	Post	Follow up	Pre	Post	Pre	Post	Post
1	4	1	3	8	8	4	6	8
2	8	8	8	8	2	0	0	1
3	6	5	7	1	3	0	0	5
4	1	0	0	1	1	2	2	1
5	6	8	8	1	1	4	3	4
6	0	0	0	5	8	0	3	4
7	0	2	2	2	1	4	5	0
8	7	3	7	0	3	3	0	3
9	0	8	-	5	7	3	3	2
10	7	8	8	8	8	7	8	3
11	0	8	8	2	3	7	5	4
12	4	8	8	3	2	8	8	4
13	5	8	8	7	3	3	4	2
14	0	8	7	1	1	7	8	3

APPENDIX IV-A  
(Continued)

Subject	DIP Group			GIP Group		No Treatment Control Group		Post Only Control Group
	Pre	Post	Follow up	Pre	Post	Pre	Post	Post
15	1	1	1	5	1	2	1	3
16	1	8	2	6	2	8	8	1
17	0	2	6	2	5	8	8	5
18	1	5	-	2	0	0	7	5
19	2	2	2	3	2	3	2	1
20	2	2	1	0	0	1	0	0
21	2	2	-	5	8	1	1	8
22	1	0	1	6	7	3	3	0
23	8	8	8	1	0	2	2	3
24	2	2	2	1	0	8	3	5
25	2	8	4	0	2	1	1	3
26	5	2	2	6	4	4	1	0
27	3	4	-	3	1	2	2	2
Mean( $\bar{x}$ )	2.89	4.48	4.48	3.41	3.07	3.52	3.48	2.96

APPENDIX IV-B

Individual and group mean pre- post- and follow-up treatment  
intrinsic resistance scores for subjects on the 'Did do'  
measure of the JHTST.

Subject	DIP Group			GIP Group		No Treatment Control Group	
	Pre	Post	Follow up	Pre	Post	Pre	Post
1	0	0	0	0	5	0	0
2	2	2	3	0	1	0	0
3	0	1	2	1	1	0	0
4	0	0	0	0	0	1	0
5	3	0	5	0	0	0	0
6	0	1	1	2	4	0	0
7	0	0	0	0	1	0	1
8	2	1	1	0	1	0	0
9	0	5	-	0	0	0	0
10	1	8	3	0	1	1	2
11	0	3	2	1	0	1	0
12	0	6	1	0	0	1	1
13	2	4	1	0	1	0	1
14	0	2	1	0	0	0	2



APPENDIX IV-B  
(Continued)

Subject	DIP Group			GIP Group		No Treatment Control Group	
	Pre	Post	Follow up	Pre	Post	Pre	Post
15	0	0	1	0	0	1	1
16	0	1	1	0	0	2	1
17	0	1	3	1	1	0	0
18	1	2	-	1	0	0	0
19	0	0	1	0	0	1	1
20	0	1	1	0	0	0	0
21	1	1	-	0	1	1	0
22	0	0	1	2	1	1	1
23	1	1	1	0	0	1	1
24	1	0	1	1	0	0	1
25	1	0	2	0	0	0	1
26	1	1	1	2	0	2	0
27	1	1	-	2	0	0	1
Mean ( $\bar{x}$ )	0.63	1.56	1.43	0.48	0.67	0.48	0.56

APPENDIX IV-C

Individual and group mean pre- post and follow-up treatment resistance scores for subjects on the 'Should do' measure of the JHTST.

Subject	DIP Group			GIP Group		No Treatment Control Group		Post Only Control Group
	Pre	Post	Follow up	Pre	Post	Pre	Post	Post
1	3	7	4	8	8	8	7	7
2	8	8	8	8	8	7	7	7
3	6	7	8	7	8	8	5	7
4	8	8	8	7	8	2	1	7
5	8	8	8	8	6	6	8	2
6	7	7	8	7	8	8	8	7
7	7	8	8	4	6	7	6	8
8	8	8	8	8	8	5	1	8
9	7	8	-	8	8	8	7	7
10	8	7	8	8	8	7	8	3
11	7	8	8	8	8	7	7	8
12	8	8	8	8	8	8	8	7
13	8	8	8	8	8	8	6	8
14	8	8	8	7	8	8	8	4

APPENDIX IV-C  
(Continued)

Subject	DIP Group			GIP Group		No Treatment Control Group		Post Only Control Group
	Pre	Post	Follow up	Pre	Post	Pre	Post	Post
15	4	2	5	7	5	4	8	8
16	8	7	8	6	5	8	8	7
17	8	8	8	4	7	8	8	8
18	8	8	-	8	8	8	8	8
19	1	3	2	4	4	8	8	8
20	2	8	8	7	8	8	8	8
21	5	8	-	8	8	8	8	8
22	8	8	8	6	7	8	3	8
23	8	8	8	8	8	3	7	3
24	6	7	8	8	8	8	8	5
25	8	8	8	4	5	7	8	6
26	7	6	8	7	5	8	8	4
27	7	7	-	8	6	4	8	6
Mean( $\bar{x}$ )	6.78	7.2	7.43	7.0	7.11	6.93	6.85	6.56

APPENDIX IV-D

Individual and group mean pre- post- and follow-up treatment intrinsic resistance scores for subjects on the 'Should do' measure of the JHTST.

Subject	DIP Group			GIP Group		No Treatment Control Group	
	Pre	Post	Follow up	Pre	Post	Pre	Post
1	0	1	0	0	5	1	0
2	1	1	3	0	2	3	2
3	1	1	2	2	1	0	0
4	1	5	2	1	1	1	0
5	3	4	3	3	1	0	0
6	3	2	2	3	2	0	1
7	1	2	2	1	1	0	1
8	4	0	2	1	3	1	0
9	2	4	-	1	0	2	0
10	4	7	4	0	0	1	1
11	0	2	2	3	2	2	0
12	1	3	2	1	5	1	1
13	1	7	3	1	1	2	2
14	2	2	1	1	1	0	2

APPENDIX IV-D  
(Continued)

Subject	DIP Group			GIP Group		No Treatment Control Group	
	Pre	Post	Follow up	Pre	Post	Pre	Post
15	1	1	1	0	0	1	1
16	2	4	1	0	0	4	1
17	0	0	4	0	0	0	1
18	1	1	-	1	1	1	0
19	2	2	1	0	1	1	1
20	1	1	1	3	1	2	8
21	4	2	-	0	1	0	0
22	1	2	2	2	1	2	1
23	2	1	1	0	2	0	2
24	1	1	1	0	0	2	2
25	0	1	1	1	0	1	1
26	1	3	2	3	3	0	0
27	1	2	-	0	0	1	3
Mean ( $\bar{x}$ )	1.52	2.3	1.87	1.04	1.3	1.07	1.15

APPENDIX IV-E

Individual and group mean pre- and post-treatment clumsiness and stealing scores for subjects on the General Moral Judgement measure.

Subject	DIP Group		GIP Group		No Treatment Control Group	
	Pre	Post	Pre	Post	Pre	Post
1	2.0	2.25	3.0	3.0	2.5	2.5
2	2.25	2.25	2.5	2.25	2.0	3.0
3	2.25	2.75	2.75	2.5	2.25	2.5
4	2.0	2.0	2.25	2.0	3.0	2.5
5	3.0	3.0	3.0	2.75	1.75	2.5
6	2.0	2.25	2.0	2.25	2.25	2.75
7	2.0	2.5	2.0	2.0	2.25	2.5
8	2.25	2.0	3.0	3.0	2.5	2.0
9	2.5	3.0	2.0	2.75	1.75	2.0
10	2.0	2.25	3.0	2.25	2.0	2.0
11	1.75	2.0	1.75	2.0	2.0	2.25
12	2.25	2.25	2.0	2.25	2.0	2.0
13	2.5	2.5	3.0	3.0	2.5	2.5
14	3.0	3.0	2.75	2.5	2.5	2.5

APPENDIX IV-E  
(Continued)

Subject	DIP Group		GIP Group		No Treatment Control Group	
	Pre	Post	Pre	Post	Pre	Post
15	1.75	2.5	1.5	2.25	2.0	2.25
16	2.75	2.25	2.0	2.75	2.0	2.0
17	2.5	2.25	1.5	2.0	2.0	2.0
18	2.25	2.25	2.0	2.0	2.75	3.0
19	2.0	2.0	2.75	2.25	2.25	2.25
20	2.25	2.25	2.0	2.0	2.5	2.5
21	2.5	2.5	2.75	3.0	2.75	2.75
22	2.0	2.75	2.0	2.0	2.25	2.5
23	2.0	2.25	1.5	2.0	1.75	2.5
24	1.75	2.5	2.0	2.0	2.3	2.25
25	2.25	2.25	2.25	2.0	2.25	2.5
26	2.5	3.0	2.0	2.25	2.0	2.0
27	2.0	2.0	1.5	2.0	2.5	2.25
Mean ( $\bar{x}$ )	2.2	2.4	2.3	2.3	2.2	2.3

APPENDIX IV-F

Individual and group mean pre- and post-treatment collective responsibility scores for subjects on the General Moral Judgement measure.

Subject	DIP Group		GIP Group		No Treatment Control Group	
	Pre	Post	Pre	Post	Pre	Post
1	1.67	1.67	2.33	1.66	2.67	2.0
2	2.66	3.0	1.66	1.0	2.33	2.33
3	2.0	2.0	1.66	2.33	2.0	2.33
4	2.0	1.33	3.33	2.33	1.33	2.33
5	2.66	2.0	2.0	2.33	1.0	1.0
6	3.0	2.0	2.33	2.66	1.33	2.0
7	2.33	2.0	1.0	2.0	1.0	1.33
8	2.5	4.0	3.0	2.0	1.0	1.67
9	1.0	3.0	2.66	4.0	2.33	3.0
10	3.0	2.33	4.0	4.0	1.0	2.67
11	2.0	4.0	2.0	4.0	3.0	1.67
12	3.0	1.0	2.66	3.33	4.0	2.0
13	2.0	2.0	2.66	2.0	2.0	1.0
14	2.0	4.0	2.66	2.33	2.0	2.33



APPENDIX IV-F  
(Continued)

Subject	DIP Group		GIP Group		No Treatment Control Group	
	Pre	Post	Pre	Post	Pre	Post
15	2.33	2.0	4.0	4.0	2.0	2.0
16	2.33	2.0	1.0	1.0	2.0	2.33
17	4.0	2.0	2.0	2.0	2.0	2.0
18	2.0	2.33	2.0	2.0	1.66	2.0
19	2.0	1.66	1.66	3.0	1.66	1.66
20	1.0	1.66	1.66	2.33	2.0	1.0
21	2.66	2.0	3.0	3.0	2.0	2.33
22	1.33	2.0	2.0	2.66	2.33	1.66
23	4.0	4.0	1.66	3.0	1.0	1.0
24	4.0	2.0	2.66	3.0	2.3	2.67
25	2.0	3.0	3.66	3.0	1.0	1.33
26	2.0	2.0	2.0	1.0	2.0	1.0
27	1.66	3.0	3.66	4.0	2.0	2.0
Mean ( $\bar{x}$ )	2.3	2.3	2.4	2.6	1.9	1.9

APPENDIX IV-G

Individual and group mean pre- and post-treatment impulsivity scores for subjects on the KMFFT.

Subject	DIP Group		GIP Group		No Treatment Control Group	
	Pre	Post	Pre	Post	Pre	Post
1	3.23	0.59	0.40	0.00	-3.23	-2.16
2	1.01	-1.69	-0.69	-0.67	-1.40	0.23
3	1.45	1.68	0.92	0.40	-0.27	1.07
4	-1.85	-1.28	-3.39	-1.13	0.90	0.03
5	0.95	0.76	-0.83	1.92	1.71	2.48
6	1.71	-0.08	-0.66	-0.58	-0.87	-0.74
7	-1.16	-1.99	1.34	1.66	2.22	4.15
8	0.57	0.10	-4.32	-4.55	1.67	1.83
9	-2.23	-2.31	-0.52	-0.90	0.58	-0.26
10	-0.1	-6.11	-1.28	0.60	3.07	1.95
11	-3.0	-1.46	-0.95	-1.57	3.29	2.32
12	0.08	-1.76	0.17	-1.39	-0.11	-0.16
13	1.73	-0.27	-1.68	-0.09	0.98	0.12
14	0.58	-0.28	-0.29	-0.13	0.53	2.08

APPENDIX IV-G  
(Continued)

Subject	DIP Group		GIP Group		No Treatment Control Group	
	Pre	Post	Pre	Post	Pre	Post
15	2.53	1.31	2.94	-0.46	-1.72	-0.76
16	2.20	1.07	0.79	2.51	1.24	-0.64
17	-1.92	-0.02	0.75	0.75	1.49	1.25
18	0.78	0.83	0.99	1.01	-0.47	-0.22
19	-0.17	-0.44	1.86	2.44	-0.64	-0.84
20	-0.28	1.09	-0.08	0.58	1.30	0.64
21	-0.47	-2.29	-0.76	1.03	0.72	-1.10
22	2.18	1.10	-1.81	-0.11	-0.75	0.67
23	-4.43	-1.37	1.11	-0.08	-0.20	0.86
24	-0.48	-0.18	-0.12	1.14	-2.66	-1.59
25	-3.11	-0.06	0.37	1.43	-0.99	-1.36
26	0.14	-1.28	0.54	0.80	-1.55	-1.91
27	3.30	1.33	-0.93	2.10	-1.57	0.46
Mean ( $\bar{x}$ )	0.12	-0.48	-0.24	0.23	0.12	0.31

APPENDIX IV-H

Individual and group mean pre- and post-treatment efficiency scores for subjects on the KMMFT.

Subject	DIP Group		GIP Group		No Treatment Control Group	
	Pre	Post	Pre	Post	Pre	Post
1	0.97	-0.31	-1.84	-1.0	3.49	3.46
2	-0.47	-0.87	-1.87	-0.85	-0.32	-0.73
3	-1.19	0.40	0.46	0.40	0.25	-0.01
4	-0.71	-0.59	0.25	1.67	-0.91	-0.77
5	0.15	0.04	-0.89	0.42	1.93	1.14
6	-0.05	-1.18	0.06	-0.94	-1.69	-0.78
7	0.86	-0.81	0.6	0.42	0.58	2.57
8	-0.03	0.18	2.32	1.23	0.85	0.77
9	1.25	0.27	0.50	-1.40	-0.32	-0.48
10	0.64	2.75	0.40	-0.34	1.41	0.65
11	0.72	-0.32	-0.49	0.47	0.91	1.04
12	0.96	0.24	-0.97	-0.39	-0.19	-0.34
13	-0.07	-0.99	-0.32	-0.65	0.12	-0.10
14	-0.04	0.98	-0.31	-0.37	-0.55	1.28

APPENDIX IV-H  
(Continued)

Subject	DIP Group		GIP Group		No Treatment Control Group	
	Pre	Post	Pre	Post	Pre	Post
15	1.67	-0.01	0.14	0.23	-0.84	-0.50
16	1.16	-0.01	-0.53	1.11	0.42	-0.88
17	-0.08	0.30	0.91	0.81	-0.95	-1.23
18	-0.80	-0.81	-0.45	-0.21	-1.53	-1.04
19	0.43	0.20	0.94	2.48	-1.64	-1.20
20	-1.72	-0.81	-1.92	-0.82	-0.48	-0.88
21	0.17	-0.01	-0.40	0.53	1.81	-0.42
22	-0.24	-1.08	-1.03	-0.63	-0.69	0.13
23	1.59	1.13	-0.85	-1.18	-1.52	-0.58
24	-0.96	1.34	-0.18	0.16	-1.04	1.09
25	0.83	1.62	-0.39	-0.37	0.97	-0.94
26	1.52	0.54	-0.56	0.50	0.11	-0.65
27	1.18	-0.03	1.19	0.50	-0.71	-0.28
Mean( $\bar{x}$ )	0.29	0.08	-0.19	0.07	-0.02	0.01

APPENDIX IV-I

Individual pre- and post- treatment real-life stealing scores  
for all subjects.

Subject	DIP Group		GIP Group		No Treatment Control Group		Post Only Control Group
	Pre	Post	Pre	Post	Pre	Post	Post
1	0	0	1	0	0	0	0
2	0	1	0	0	1	1	0
3	1	1	0	0	1	1	0
4	0	0	0	0	0	1	0
5	0	0	0	0	0	0	0
6	1	0	0	0	0	0	1
7	0	1	0	0	0	0	0
8	0	0	0	0	0	1	1
9	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0
11	1	1	0	0	1	0	0
12	0	0	0	0	0	0	0
13	1	0	0	0	0	0	0
14	1	0	0	1	0	0	0

APPENDIX IV-I  
(Continued)

Subject	DIP Group		GIP Group		No Treatment Control Group		Post Only Control Group
	Pre	Post	Pre	Post	Pre	Post	Post
15	1	1	1	0	0	0	0
16	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0
18	0	1	0	0	0	0	0
19	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0
21	0	0	0	0	1	1	0
22	0	0	0	0	0	0	0
23	0	0	0	0	1	0	0
24	1	0	0	0	0	0	0
25	0	0	0	0	0	0	1
26	0	0	1	1	0	0	1
27	0	0	0	0	0	0	0

APPENDIX IV-J

Individual pre- and post-treatment real-life cheating scores  
for all subjects.

Subject	DIP Group		GIP Group		No Treatment Control Group		Post Only Control Group
	Pre	Post	Pre	Post	Pre	Post	Post
1	1	0	1	1	1	0	0
2	1	1	0	0	0	1	0
3	1	1	0	0	0	0	1
4	1	1	1	0	0	0	0
5	1	1	1	1	1	1	0
6	0	1	0	0	1	1	0
7	1	1	1	0	0	0	0
8	1	1	1	0	0	0	0
9	1	1	1	1	0	0	1
10	0	0	0	0	0	0	0
11	1	1	0	0	0	1	0
12	0	0	0	0	1	1	0
13	1	1	0	0	1	0	0
14	0	0	0	1	1	0	1



APPENDIX IV-J  
(Continued)

Subject	DIP Group		GIP Group		No Treatment Control Group		Post Only Control Group
	Pre	Post	Pre	Post	Pre	Post	Post
15	1	1	0	1	0	1	1
16	1	1	0	1	1	0	0
17	0	0	0	0	1	0	1
18	0	1	1	0	0	0	0
19	0	0	1	0	0	0	1
20	0	1	0	1	0	1	1
21	1	0	0	1	1	1	1
22	1	1	1	1	0	0	0
23	0	1	1	1	1	0	0
24	0	0	0	1	0	0	0
25	0	0	0	1	1	1	0
26	1	1	0	0	1	0	0
27	1	0	1	1	0	1	1

APPENDIX IV-K

Analysis of Covariance on post test resistance scores on the 'Did do' measure of the JHTST for the DIP, GIP, and no treatment control groups, using the pre-test scores as the covariate.

Source	MS	df	F
Groups	22.12	2	3.60*
Error	6.15	77	

\*  $p < .05$

APPENDIX IV-L

Analysis of Covariance on post-test, intrinsic resistance scores on the 'Did do' measure of the JHTST for the DIP, GIP, and no treatment control groups, using the pre-test scores as the covariate.

Source	MS	df	F
Groups	7.66	2	3.82*
Error	2.00		

\*  $p < .05$

APPENDIX IV-M

Analysis of Covariance on post-test resistance scores on the 'Should do' measure of the JHTST for the DIP, GIP, and no treatment control groups, using the pre-test as the covariate.

Source	MS	df	F
Groups	1.80	2	0.89*
Error	2.02		

\* $p > .05$

APPENDIX IV-N

Analysis of covariance on post-test intrinsic resistance scores on the 'Should do' measure of the JHTST for the DIP, GIP, and no treatment control groups, using the pre-test scores as the covariate.

Source	MS	df	F
Groups	7.52	2	2.99*
Error	2.51		

\*  $P < .05$

APPENDIX IV-0

Analysis of covariance on post-test clumsiness and stealing scores on the General Moral Judgement measure for the DIP, GIP and no treatment control groups, using the pre-test scores as the covariate.

Source	MF	df	F
Groups	0.04	2	0.5*
Error	0.08		

\*  $p > .05$

APPENDIX IV-P

Analysis of covariance on post-test collective responsibility scores on the General Moral Judgement measure for the DIP, GIP, and no treatment control groups, using the pre-test scores as the covariate.

Source	MF	df	F
Groups	1.93	2	3.38*
Error	0.57		

\*  $p < .05$

APPENDIX IV-Q

Analysis of covariance on post-test impulsivity scores on the KMFFT for the DIP, GIP, and no treatment control groups, using the pre-test scores as the covariate.

Source	MF	df	F
Groups	6.28	2	3.89*
Error	1.61		

\*  $p < .05$



APPENDIX IV-R

Analysis of covariance on post-test efficiency scores on the KMFFT for the DIP, GIP, and no treatment control groups, using the pre-test scores as the covariate.

Source	MF	df	F
Groups	0.37	2	0.49*
Error	0.75		

\*  $p > .05$