PROBLEMS OF THEORY AND RESEARCH :

AN EVALUATION OF A VOCATIONAL TRAINING PROGRAMME FOR DISABLED ADOLESCENTS

Marta Lohyn, B.A. (Hons.) (Adelaide)

awarded 23.3.90

Thesis submitted for the Degree of Master of Arts

Department of Psychology
The University of Adelaide
Adelaide. South Australia

March 1989

TABLE OF CONTENTS

			Page
LIST OF TABLES AND FIGURES			v
DECLARATION			vi
ACKNOWLEDGEMENTS			vii
ABSTRACT			viii
CHAPTER 1 :	DEFINING THE CONTEXT		1
1.1	INTRODUCTION		1
1.2	THE BACKGROUND		1
1.3	THE HETA PROGRAME		3
	1.3.1	The Evaluation	5
	1.3.2	Problems of Theory and Research	5
CHAPTER 2 :	PROBLEMS OF THEORY AND RESEARCH		7
2.1	THE INTERRELATIONSHIP OF THEORY AND RESEARCH		7
	2.1.1	Consequences of the Interrelationship of Theory and Research	8
	2.1.2	The Structure of Social Science Theory	8
	2.1.3	The use of Academic and Applied Theories	9
	2.1.4	Summary : The Interrelationship of Theory and Research	10
	2.1.5	Relevance to the HETA Evaluation	10
2.2	METHODOLOGICAL PROBLEMS IN FIELD RESEARCH		13
	2.2.1	Randomization	13
	2.2.2	Obstacles to Randomization in the Field	14
	2.2.3	Alternatives to Randomized Designs	15
	2.2.4	Threats to Validity	16
	2.2.5	Quasi-Experimental Designs	17
	2.2.6	Problems Particular to Evaluation Studies	18
	2.2.7	Methodological Issues inherent in Field Research	20

Page

CHAPTER 2 : (continued)

2.3 THE CASE STUDY FRAMEWORK 21

2.3.1 Relevance to the HETA Programme 22

CHAPTER 3 : THE PSYCHOLOGICAL LITERATURE AND THE DISABLED 23

3.1 INTRODUCTION 23

3.2 THEORIES AND EMPIRICAL DATA ON ADJUSTMENT OF THE DISABLED 23

3.2.1 General Comment 23

3.2.2 The Maladjustment View : The Theories and their Problems 25

3.2.3 The Maladjustment View : The Studies and their Problems 29

3.2.4 Summary 40

3.2.5 The Non-Maladjustment View : The Theory and its Problems 41

3.2.6 The Non-Maladjustment View : The Studies and their Problems 46

3.2.7 Summary 53

3.3 THEORIES AND EMPIRICAL DATA ON SELF CONCEPT, VOCATIONAL MATURITY AND INDEPENDENCE SKILLS 54

3.3.1 General Comment 54

3.3.2 Self Concept 55

i) Why Self Concept? 55

ii) Self Concept 56

iii) Self Concept and the Disabled: The theory and its problems 58

iv) Self Concept and the Disabled: The studies and their problems 62

v) Summary : Self Concept 67

3.3.3 Vocational Maturity 67

i) Why Vocational Maturity? 68

ii) Vocational Maturity - Problems with the theory 69

iii) Vocational Maturity - Problems with the research 76

iv) Summary : Vocational Maturity 80

		Page
CHAPTER 3 :	(continued)	
	3.3.4 Independence Skills	81
	i) Why Independence Skills?	81
	ii) Summary : Independence Skills	82
3.4	SUMMARY : CHAPTER 3	82
CHAPTER 4 :	PSYCHOLOGICAL LITERATURE ON GROUP THERAPY	83
4.1	THE GROUP THERAPY LITERATURE	84
	4.1.1 General Comments	84
	4.1.2 Group Therapy : Findings and Methodology	84
	4.1.3 Group Work with the Disabled	87
	4.1.4 Conditions Necessary for Change in Groups	92
4.2	SUMMARY : PSYCHOLOGICAL LITERATURE AND GROUP THERAPY	101
CHAPTER 5 :	METHOD	103
5.1	DESIGN	103
5.2	THE SETTING	104
5.3	TEST MEASUREMENTS	105
	5.3.1 Procedures and Purpose	105
	5.3.2 Subjects	106
	5.3.3 Instruments	107
	5.3.4 Content Analysis	112
CHAPTER 6 :	RESULTS	115
6.1	INDIVIDUAL MEASURES	115
CHAPTER 7 :	RESULTS	123
7.1	CONTENT ANALYSIS	123
	7.1.1 Hypothesis 3	123

Page

CHAPTER 7 : (continued)

SECTION A : The context defined by relationships between leader behaviour and participant behaviour/perception 125

SECTION B : Change scores which emerge as being significantly related to leader behaviours 131

Summary : Hypothesis 3 136

SECTION C : Further Hypotheses 138

Hypothesis 4 138

Summary : Hypothesis 4 139

Hypothesis 5 139

Summary : Hypothesis 5 140

CHAPTER 8 : DISCUSSION 142

8.1 SUMMARY OF RESULTS 142

8.2 INTERPRETATION OF RESULTS 143

8.3 PROBLEMS OF INTERPRETATION 146

8.4 LIMITATION OF THE EVALUATION 147

8.5 FINAL CONCLUSIONS 149

8.5 RECOMMENDATIONS FOR FURTHER RESEARCH 150

8.6 FINAL COMMENTS 151

APPENDICES: A. Description of Disabilities 154

B. Explanation of Categories 156

C. Participant Questionnaire 163

D. Data Tables 166

BIBLIOGRAPHY 175

LIST OF TABLES

		Page
1.	Means for Tennessee Self Concept Scale (TSCS), Career Maturity Inventory (CMI) and Adaptive Functioning Index (AFI)	117
2.	2-Way Analysis of Variance for CMI Scores	120
3.	Students t for AFI Scores (HETA Group only)	121
3(a)(i)	Significant Correlations between Leader and Participant Behaviour	126
3(a)(ii)	Significant Correlations between Participant Behaviour and Participant Change scores	128
3(a)(iii)	Leader Behaviour Correlated with Participant Perception	129
3(a)(iv)	Significant Correlations between Participant Perceptions and Change scores	130
3(b)(i)	Correlations between Leader Behaviours, Participant Behaviour and Participant Change scores	132
3(b)(ii)	Correlations between Leader Behaviour and Participant Perceptions and Change scores	133
3(c)(i)	Correlations between Participant Behaviour and Participant Perceptions	135
3(c)(ii)	Significant Correlations between Leader Behaviour and Participant Behaviours, those Behaviours and Perceptions, those Perceptions and Change scores	137

LIST OF FIGURES

FIGURE 1.	Changes Vocational Maturity for HETA and Control Group	120
FIGURE 2.	Correlating Leader Behaviour, Participant Behaviour and Participant change scores	124
FIGURE 3.	Correlating Leader Behaviour, Participant Behaviour, Participant Perception and Participant Change Scores	124

DECLARATION

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, the thesis contains no material previously published or written by another person, except where due reference is made in the text of the thesis.

Signed

Marta Lohyn

March 1989

ACKNOWLEDGEMENTS

I wish to thank my Supervisor, Mike Innes, of the Department of Psychology, University of Adelaide, for his help and encouragement.

My thanks also to Bob Willson of the Department of Psychology for his assistance with the computer analysis of the results.

I wish also to thank the participants in this work and my colleagues at the Regency Park Centre for their help in carrying out the study.

ABSTRACT

This thesis addresses the problems involved in the evaluation of a vocational training programme for disabled adolescents. The vocational training programme attempted to alter participants' job skills, their self concept and also their levels of vocational maturity and the evaluation tried to assess the degree to which any such changes might be related to processes of interaction within the group of participants over the course of the programme. The thesis reports the results of the evaluation and places the evaluation in the broader conceptual context of the relationship between theory, methodology and analysis in programme evaluation in naturalistic settings.

CHAPTER 1

DEFINING THE CONTEXT

1.1 INTRODUCTION

> "It is our belief that the integration of theory, conceptual analysis, and methodology provide the strongest possible foundation for evaluation research."
>
> (Sechrest et al., 1979, p. 17)

This statement bears directly on the main theme of this thesis: the kinds of difficulties which occur when the integration referred to above, is lacking. The problems of theory and research then, will be discussed in the context of a particular piece of field work, that being an evaluation of a pilot programme for a group of disabled adolescents.

Because of the nature of this thesis, the author will necessarily engage in discussion at two conceptual levels throughout: the more abstract general level of comment related to the broad issues of the problems of theory and research, and more specific level of comment dealing with the particular problems of theory and research in the evaluation itself.

We will now provide some background information to orient the reader towards the broader social context of the disabled. This will be followed by a brief description of the programme itself, and then of the evaluation. The chapter will end with an introduction to the kinds of problems with theory and research encountered in this evaluation.

1.2 THE BACKGROUND

The 1970s in Australia saw an important change in vocational training for the disabled. Until then vocational training in rehabilitation was based essentially on a skills acquisition model, which focused on improving actual job skills rather than interpersonal or general social skills. However, the development of two

new programmes in 1976 and 1977 for disabled adolescents heralded a new trend. These programmes were devised using psychosocial as well as skills training principles, and were based on two beliefs: firstly, that disabled youngsters lacked certain social and interpersonal skills, which reduced their employment prospects and, secondly, with the right kind of training, these youngsters could become employable.

It is relevant to note that such a shift in a specific area of rehabilitation can be seen within a broader social context. Wright (1977), in discussing the changes in attitude towards people with handicaps, comments

> "Attitudes towards people with handicaps are not isolated phenomena that stand apart from the general sweep of social change. Two of the most vital general developments since World War II have been the increased emphasis on human and civil rights for all people and the determination on the part of disadvantaged groups to speak out and act on their own behalf." (p. 259)

Wright continues to point out that in the U.S.A. there have been significant changes in attitude which have manifested themselves in a number of ways. At one level of society, different bodies have formulated principles to serve as guidelines for the functioning of various organizations. For example, "A Bill of Rights for the Disabled" published in 1972, highlights 16 rights that apply to such areas as health, education, employment, housing, transportation and civil rights. A similar "Bill" was adopted by the United Cerebral Palsy Association in 1973, and included the right of the handicapped to petition social institutions and the courts to "gain such opportunities as may be enjoyed by others but denied the handicapped because of oversight, public apathy or discrimination" (Wright, 1977, p. 261).

At another level, there has been an attempt to translate these statements of principle into practice. The issue of integration bears on this, in that

legislation has now been passed in a number of countries (U.S.A., Britain, Australia) ensuring physical access (and therefore often architectural modification) to public buildings and places. In South Australia, the Education Department must make any architectural alterations necessary in a school to accommodate a disabled student. In 1974, the Federal Government in Australia passed the "Equal Opportunities Bill" which enabled disabled Australians to deal with discrimination through legal channels.

At yet another level, there has been a change in educational policy towards integration of disabled children. The assumption of many rehabilitation professionals that institutionalization is the only option for many disabled children and adults is changing. The overt manifestation of this change is the emergence of a number of training programmes for the disabled in Australia, aimed ultimately at integration of one form or another.

As this change in attitude manifested itself in the development of new programmes for the disabled, so the need to justify these programmes (in financial terms) also emerged. In the general economic climate of recession, it became increasingly important to show that funds allocated to social needs programmes were well spent, and that these programmes were effective and produced the desired changes in their participants. It is also important to note that the need for evaluation came from complex motivations: sometimes to affirm social needs programmes, and indeed often to undermine the validity of their existence. Rehabilitation also experienced this pressure and agencies servicing the disabled started to build in evaluations as necessary aspects of any new programming.

1.3 THE HETA PROGRAMME

It is within the broader context of changing attitudes towards the disabled, the changing face of vocational training programmes, and the need to demonstrate

the effectiveness of new programmes, that the Handicapped Employment Training Assistance (HETA) programme was established. HETA was designed in 1978 by staff at the Regency Park Centre for the Young Disabled in Adelaide, South Australia, which caters for physically disabled people from the age of 2 to about 20 years. It became increasingly apparent to professionals working with the adolescent group that a number of these disabled youngsters, while lacking in social skills, seemed to have the potential to develop employable vocational skills. It was thought that the disabled youngsters' chances of finding and maintaining employment could be significantly improved with the right training.

The HETA programme was tailored to suit a particular group of disabled adolescents who were clinically observed to be similar in three major ways:

a) They all lacked self-confidence, which manifested itself in poor social skills and poor attitude towards self.

b) They were all uninformed and unrealistic about their own vocational futures, trending to either over or under estimate their vocational potential for employment.

c) They lacked important skills related to independent living in general, e.g. survival reading (i.e. basic reading skills enabling, for example, reading of signs), organizing transport for themselves, budgeting.

In that these three characteristics were seen to be related to the overall goal of the programme, which was to make these youngsters employable, the HETA programme was designed to affect participants' self concept, vocational maturity and independence skills. The designers of the programme decided to have two major components to the programme: group sessions aimed at changing self concept, vocational maturity and independence skills, and supervised placements of participants in real vocational settings.

1.3.1 The Evaluation

It is important to note here that the author of this thesis did not design the HETA programme, but rather was called in to design the evaluation of the programme. Because the three variables of self concept, vocational maturity and independence skills had already been designed into the programme, it was important to tailor the evaluation to include study of these variables. In addition, although the psychological literature gave almost no direction with respect to the variables which this kind of evaluation should study (for reasons that will be discussed in future chapters) at least reasonably respectable instruments measuring change in self concept, vocational maturity and independence skills, were available.

As well as this, because the programme had been designed as a group programme, it was important to observe group processes and how they were linked with changes in self concept, vocational maturity and independence skills. The author took considerable direction from the group therapy literature in designing the group interaction rating scheme, which analysed group processes and their association with participant change during the course of the programme.

1.3.2 Problems of Theory and Research

One of the first problems of theory and research occurred at the very point of conception of the HETA programme. The programme's design emerged as a response to clinically observed need; basic assumptions regarding important client variables were not supported by a theoretical position articulated in the literature. Accordingly, when the author consulted the psychological literature to find direction for the design of the evaluation, a second problem of theory and research emerged. This was that the available psychological literature on the disabled not only offered no overall direction with respect to which variables should be studied, but also showed the existence of a considerable lack of

integration between the theory and empirical research. The following chapter will discuss and explore the difficulties related to integrating theory and research, while Chapters 3 and 4 will present the psychological literature relevant to the evaluation itself.

CHAPTER 2

PROBLEMS OF THEORY AND RESEARCH

The kinds of problems of theory and research addressed by this thesis may be discussed at two levels: the level which tends to the philosophical and abstract, and considers the interrelationship of theory and research, and the more pragmatically oriented level of difficulties of research designs and methodology, which are often inevitable when doing research in the field. The author intends to discuss the problems of theory and research at both of these levels, with a view to identifying the relevance of this discussion to the HETA evaluation itself.

2.1 THE INTERRELATIONSHIP OF THEORY AND RESEARCH

The view that our theories and research are related in some way is expressed by Snizek and Fuhrman (1980), who explore this interrelationship, especially with regard to the individual investigator. In so doing, they consider that this interrelationship in general goes unrecognised, and researchers may not realise that the theory to which they ascribe significantly influences how they go about their research. In studying over 1,000 journal articles published in a number of major sociological journals between 1950 and 1970, Snizek (1975, 1976, 1979) discovered that those authors whose theoretical orientation centred around the study of group properties and the generation of structural laws, generally tended to use the less quantitative data-gathering and analysis method. On the other hand, authors with a distinctive psychological or individualistic theoretical perspective predominantly were shown to employ quantitative research techniques amenable to more sophisticated statistical operations.

The argument here is then, that the theories held by investigators influence their choice of analysis technique, the results of which in turn tend to confirm their conceptual frame. This can of course result in what are essentially tautologies.

2.1.1 Consequences of the Interrelationship of Theory and Research

Snizek and Fuhrman (1980) then continue to comment that such tautologies can lead to biased findings. To avoid this, they advise the investigator to examine carefully the assumptions underlying both the theory and the research methods chosen. In addition, not only should there be consultation wherever possible with other colleagues as to the proposed design, but there should also be use made of multi-operationalism in the measurement of concepts. Finally, individual scientists are advised to be as sceptical of their own results as they are often perceived to be of their colleagues' results.

2.1.2 The Structure of Social Science Theory

The next interesting and substantive point made by Snizek and Fuhrman (1980) is that not only may the interrelationship of theory and research create problems for the applied scientist (in the form of a tautology) but the very structure of social science theory may also lead to difficulties. Theory is generally defined as a "systematically related set of statements, including some lawlike generalizations that are empirically testable" (Lindner, 1970, p. 10). When defining theory in this way, one theory may be seen to be better than another when its explanatory and predictive power is greater. However, it is possible to have competing theories of the same phenomenon, where those theories are not easily compared due to different conceptual frameworks, or different levels of conceptualization. A good example of this would be theories of behaviour based on the concept of linear causality, for example learning theory as opposed to theories of behaviour based on the concept of circular causality, for example systems theory. Linear causality is a linear explanation of events, i.e., event A leads to event B; circular causality, on the other hand, describes reciprocal relationships, i.e. event A both stimulates and is a response to event B. The point being made here is that social science theory is not an agreed-upon

set of propositions concerning human behaviour. The applied scientist then, has to make a choice regarding which theory will form the basis of the applied work being done. As suggested in the discussion of the interrelatedness of theory and research that choice is likely to be influenced by the scientists' own conceptual orientation, and by the extent to which available theories are predictive.

2.1.3 The Use of Academic and Applied Theories

There is also the additional problem of the differences between academic and applied theories. It is reasonable to suggest that the formulation of academic and applied theories is influenced by different concerns and interest. And yet, say Snizek and Fuhrman, there is still a tendency to utilize the standards of academic theory in the applied situation.

What, however, are the differences between theories which are useful to the applied scientist and those useful to the academic? For the applied scientist, the theory should be relatively simple, contain as small a number of variables and hypothesize as few relationships among the variables as possible. The theory should also state causal relationships, and the applied scientist should select the theory whose variables can most easily and practically be manipulated.

The academic's theory, in contrast, is both comprehensive and complex, inferential and associational, complete and non-practical. The authors, however, are quick to point out that they are not judging one kind of theory to be better or worse than the other - just that they are different, stem from different contexts and respond to different situationally-defined needs.

This question of the interrelatedness of theory and research is also addressed by three "recognized scholars" in their particular fields, in another article by Snizek and Fuhrman (1980b). Their views are in response to these three questions: What theory(s) have you found useful in your own work in applied social science? What modifications, if any, must usually be made in the application of theory within an applied context? From your experience,

what are the major characteristics a theory ought to have if it is going to "work" in an applied setting?

In summary, all three contributors argued that theory is important for the conduct of applied research. They all consider that theory enters into the research process, regardless of whether the researcher or clients are aware of it. They also all argue that applied behavioural scientists need theories that are predictive, and designed for a specific setting, and suggest new kinds of important information. Finally, they agree that the standard (academic) criteria for evaluating theory may not be the same as that operative in the applied arena.

2.1.4 Summary: The Interrelationship of Theory and Research

So far, then, the following points have been made:

1) Theory and research are inextricably interrelated.
2) This has implications for the applied researcher in that his results may be biased if he is not critically aware of a potential tautology.
3) Difficulties for the applied researcher emerge not only from this interrelationship of theory and research, but also from the very structure of social science theory.
4) These difficulties are related to a definition of theory as both explaining and predicting events; social science theory in general is not an agreed upon set of propositions regarding human behaviour, in that one finds different and not easily comparable theories about the same phenomenon.
5) Finally, although there are important differences between academic and applied theories, academic theories are nevertheless often used in the applied setting.

2.1.5 Relevance to the HETA evaluation

How, then, is all this relevant to the HETA evaluation? In the author's view, the ideas presented, to date, are very relevant in that they provide an

overview and context for both the limitations and definitive statements found in the literature reviewed in the last two chapters. More specifically:

a) The argument made by Snizek and Fuhrman (and others) that theory and research are interrelated, is supported by a number of observations about the literature on the psychology of the disabled. First of all, empirical literature on maladjustment is by no means one-sided. That is, many studies can be found to support both the view that the disabled are maladjusted and the view that they are not. It seems that where the researchers start from a position that maladjustment is inevitable, their results support this. And when they start from the opposite position, their results support the non maladjustment view. Could this literature be suffering from the tautological biases referred to by Snizek and Fuhrman.

b) The theories of maladjustment themselves seem to be derived from academic rather than applied contexts. This may explain the often-referred-to lack of "integration" between theory and research. As Snizek and Fuhrman point out, academic theories are often complex, inferential and non-practical. It is the present author's suggestion that because academic rather than applied theories usually define the conceptual framework of much of the empirical work, the seeming lack of integration of theory and research in this literature on maladjustment is inevitable.

c) With respect to the other variables addressed in this study, that is, self concept and vocational maturity, there is a singular lack of convincing theoretical argument. There may be a number of reasons for the apparent lack of interest both theoreticians and empiricists have shown in these areas. One of the reasons may be that the accepted structure of social science theory (ie. that it is both descriptive and predictive and often linear) is limited and inadequate for applied situations which are likely to have many complex interacting variables and reciprocal relationships. It

may simply be that social scientists do not have appropriate paradigms to theorize meaningfully or experimentally investigate these areas. (It is also likely that pragmatic factors like lack of research funds have an influence here.)

d) In contrast to the literature on disability, the literature on Groups is both integrated (theoretically and empirically) and substantive. In particular, the theoretical literature on conditions necessary for change in groups, is clearly conceived and supported by much of the experimental work. It is the author's view that this is so because the theoretical framework identifies causal relationships (i.e. links specific group leader behaviour with specific client changes), addresses itself to a small group of variables (empathy clarification and so on), and in so doing, makes its hypotheses empirically testable. The theory on conditions necessary for change in groups would not be seen by Snizek and Fuhrman as an academic theory, and curiously enough, it was articulated by a man (Rogers), who was, and is, a practising psychotherapist rather than solely an academic.

e) To summarize the author's view, much of the literature presented in Chapter 3 suffers from tautological bias, the limitations of the structure of social science theory, and the inappropriate use of academic rather than applied theories. Innes (1983) summarizes well, when he says that our methods are not theory-free, and that they stem from a perspective which identifies causal relationships in a linear way. He considers that

> "To try and impose these notions into settings where other things are shifting . . . at the least may not enable us to understand the phenomena we are being paid to study and may even lead us to misunderstand the situation." (p. 13).

2.2 METHODOLOGICAL PROBLEMS IN FIELD RESEARCH

Since the inception of evaluation as a field, there has been a great emphasis on the importance of sound methodology. In particular, Campbell and his associates have been most articulate about the problems of designing investigations. In that they have analysed a wide variety of research designs and have clearly identified the major threats to validity posed by each, the author will frequently refer to their work. This section will consist of discussion of key issues in research design and consideration will also be given to some of the inevitable problems faced by field research.

2.2.1 Randomization

A key issue in the literature on design analysis, is that of random allocation of subjects. This procedure is seen to be both essential for validly inferring treatment-caused change so that alternative explanations may be ruled out. It must also be said at this point, however, that while randomization is seen to be a most desirable aspect of any research design, it is not considered by Cook and Campbell (1979) to be a panacea which solves all design problems. While one of its functions is to ensure that samples are comparable to each other (and the other is that samples are representative of a known population) randomization does not necessarily make experimental groups equal. It serves, rather, to make most things equal between experimental groups, and thus can be seen as being better than the available alternatives for inferring cause rather than perfect for inferring cause.

With respect to evaluations in particular, Campbell and Cook's view that randomization is desirable in research designs is supported by Boruch (1981), who considers that randomized evaluation leads to "clearer images of the effect of a treatment" (Innes, 1983, p. 8). Gilbert et al. (1975) also take this view, when they say that randomized controlled field trials are "currently our best device for appraising new programs." (p. 50).

Given that randomization is seen to be important, the next relevant question to ask is: What if it is not possible to make use of this procedure as is often the case with field research? Cook and Campbell (1979) recognize this restraint which frequently occurs in field settings, when they predict that random assignment will be less frequent with humans than with objects, and even less frequent with humans in the field than in the laboratory.

2.2.2 Obstacles to Randomization in the Field

Cook and Campbell also identify a number of obstacles to conducting randomized experiments in the field. These include problems related to the mechanical procedures involved in randomization (like biased selection of random samples, not large enough numbers of subjects), as well as problems related to human responses and values. More specifically, the latter refers to:

a) Withholding the treatment from the no-treatment group: this may be seen as unethical by both the public and administrators, the latter of whom may, and often do, disallow randomization on the grounds that it is unethical to withhold treatment from some and not others.

b) Treatment related refusals to participate in the planned experiment: sometimes people may refuse to receive the treatment that is scheduled for them. That is, subjects may not actually do as is asked of them and thus undermine the experiment, rendering the randomization procedure ineffective.

c) Treatment related attrition from the experiment: people may perceive different experimental treatments as less or more attractive and hence may withdraw, which makes it difficult to maintain the same number and nature of people participating in an experiment over any period of time.

d) The treatment in the no treatment group: although subjects may be assigned to a non-experimenter planned treatment group, this does not ensure their not experiencing anything significant between a pretest and post test.

Any number of events can happen to the control subjects over and above spontaneous maturation, and thus undermine the power of randomization. Cook and Campbell (1979) give the example of a programme to help unemployed people adjust. The control group, however, were actually receiving counselling while the experimenters believed they were simply receiving information of a particular kind.

One additional obstacle to randomization in the field which is mentioned by Cook and Campbell (1979) is that of heterogeneity in the extent of treatment implementation. Sometimes treatments are not delivered in a standardized way to the experimental group which, once again, would mean that the randomization procedure was undermined and, in a sense, rendered irrelevant.

2.2.3 Alternatives to Randomized Designs

Having discussed some of the obstacles to randomization, it is relevant now to ask this question: What if some of these obstacles cannot be overcome, and random assignment is just not available to the experimenter? Cook and Campbell (1979) of course address themselves to this problem, and describe a number of designs which they consider to be acceptable in situations where randomization is not possible. In developing their method of design evaluation, Campbell and his associates defined three kinds of research design: pre-experimental, experimental and quasi-experimental. Experimental designs involve randomization, while the other two do not. More specifically, experimental designs are those in which the researcher has control over the scheduling of data collecting procedures, over the scheduling of experimental stimuli, as well as over randomization. Pre-experimental designs are those where the experimenter has control over the scheduling of experimental procedure but not over the scheduling of data collecting procedures and randomization. Quasi-experimental designs are those where the researcher has control over the scheduling of data collecting

procedures, but lacks full control over the scheduling of experimental stimuli and randomization. (The HETA evaluation falls broadly into the last category, that of quasi-experimental design, although we may also have, later in the consideration of the design and data analysis, to consider the HETA evaluation as akin to a case study analysis of the problem, c.f. Yin, 1984.)

2.2.4 Threats to Validity

In considering the problems of acceptable designs for field research, Campbell and his associates have also identified what they consider to be threats to both the internal and external validity of any design. These threats, unless controlled, may serve as alternative explanations to account for any effects found in a given experiment. Before listing these threats which apply particularly to non-laboratory settings, a comment regarding internal and external validity is in order. Internal validity is seen to be the basic minimum without which any experiment is uninterpretable. External validity refers to the extent to which results can be generalized to other populations, settings and so on.

In an article dealing with evaluations of programmes aimed at social reforms, Campbell (1969) lists a number of threats to internal and external validity. Amongst those referring to internal validity, he considers that for example, history, maturation, testing and selection biases could all act to undermine the validity of change scores. When discussing threats to external validity, Campbell (1969) suggests that for example, interactive effects of testing and interaction of selection and experimental treatments, may also act to invalidate positive outcomes.

Since Campbell's original postulation of the concepts of internal and external validity a debate has emerged, focused on the priority of both of these ideas. While Campbell tends to favour internal validity as being most important, Cronbach (1982) takes the view that generalizability of results, i.e. external

validity, is the more important of the two. Cronbach's view is expressed with particular reference to evaluations, where results and impact of interventions are not as easily predictable as they may be in the laboratory setting. In brief and very general terms, Cronbach's contribution seems to be related to his:

a) identifying Cook and Campbell's work as being based on the assumption that the design should try to demonstrate the causal relationship between intervention and effect, and thus internal validity is of prime importance.

b) challenging this assumption as being relevant to evaluations by saying that even if one accepts that some designs suggest causality, they provide support for rather than proof of causal relationships. In addition it may also be that in evaluations, other information besides that relating to causal relationships is more important to external validity. " . . . while an observed difference does imply causality if the design was sufficiently strong, even the strongest design supports only plausible reasoning and not proof. Moreover, the evaluator's hearers want to know, to the extent possible what made the difference. That turns attention to external validity." (Cronbach, 1982, p. 329).

2.2.5 Quasi-Experimental Designs

In addressing themselves to the problems of field research, Cook and Campbell (1979) discuss a wide variety of quasi-experimental designs. These research designs tend to fall into two major categories: the non-equivalent control group design, where a comparison group is available, and a time series design, where no control or comparison group is possible. The problems for interpretation and possible threats to validity are thoroughly addressed by Cook and Campbell (1979) and will be discussed later by the author with respect to the design ultimately chosen for the HETA evaluation. Although Campbell and his associates generally advocate the use of "true" experiments with randomization

and control groups, Campbell summarizes his position well when he says:

> "But where randomized treatments are not possible, a self critical use of quasi experimental design is advocated. We must do the best we can with what is available to us." (Campbell, 1969, p. 411)

2.2.6 Problems Particular to Evaluation Studies

Keeping in mind the general trend in the literature favouring randomization and "true" experiments as providing the best research design for inferring treatment caused change, it is important now to consider some difficulties faced by evaluation studies, even when they meet some of the conditions considered important by Campbell and his associates. One view expressed by Sechrest et al. (1979) is that Campbell and his associates make a number of assumptions in their recommendations of various designs in field research. These assumptions do not necessarily hold in evaluation research, and Sechrest et al. focus their discussion on two such assumptions: that treatments are both strong enough and that they maintain their integrity throughout the course of a given study.

The area of evaluation research which has shown most interest in issues of strength of treatment is medicine. Not only is there an awareness and knowledge of the effects of a drug if it is given in a too high or too low dosage, over too short or too long a period of time, or too frequently or infrequently, but there is also an understanding of the strength of the drug as it interacts with the nature and seriousness of the problem and the characteristics of the patient. Treatment plans and interventions in medicine are often designed on the basis of such knowledge, and it is supposed that weak treatments lead to weakened or non-existent results and thus should be avoided.

However, this kind of orientation towards understanding the effects of the strength of treatment in interventions, is rare when designing treatment programmes in other areas. Sechrest et al. (1979) argue that, for example,

when it has been concluded that some form of intervention has not been successful for the rehabilitation of criminal offenders, or that an educational programme has not resulted in noticeable gain in pupil skills, few objections are raised that the treatment may not have been strong enough. They consider that "any conclusions about whether a treatment is effective can be reached only in full knowledge of how strong the treatment was." (p. 20).

The integrity of the treatment, which refers to the fidelity with which the treatment is actually delivered, is the other assumption which, according to Sechrest et al. (1979) is often untenable in evaluation research. Treatments, as they are delivered in real settings, are rarely standardized and sometimes delivered by poorly trained or unmotivated people. The integrity of the treatment may be undermined in this way, and the lack of successful outcome results may say more about the way in which the treatment was delivered rather than the actual power of the treatment, if properly implemented.

While Sechrest et al. (1979) indirectly suggest that randomization and good research design is not a sufficient condition for determining the success of a programme, Pillemar and Light (1979) do so blatantly. When discussing the use of results from randomized experiments to construct social programmes, they argue that there are

> "Several methodological caveats that . . . are general and quite separate from the question of randomization. They all pertain to situations in which a well-evaluated experimental treatment may perform unpredictably if implemented more widely." (p. 717)

The caveats they refer to are as follows:

1) Considering relative gain: sometimes, the benefits that a programme confers on any one recipient is a function of how many other people receive the programme. For example, a randomized and well-designed programme aimed at training paramedics is evaluated as successful when

the participants find employment and perform well. However, if the market has a demand for 20 paramedics, the programme will be more successful when it has 20 participants (and they all find positions) than when it has 20,000 participants (who can't all find positions).

2) Unpredictable interactions between immediate and follow-up programme effects: While, once again, a randomized and well-designed programme may produce good outcome results, these gains may dissipate when followed by incompatible programmes. It is important to follow participants longitudinally, and while evaluators may feel very confident in the initial outcome of a well done study, poor long-term outcomes may result in situations where a programme interacts unpredictably with a follow-up programme.

3) Unpredictable consequences of implementing experimental treatments over long periods of time: qualitative differences may emerge in the effects of a treatment, and this depends on whether it is temporarily superimposed on naturally existing behaviours, or whether it forces the re-organization of those behaviours.

Pillemar and Light (1979) argue that these three caveats ought to be kept in mind before widely implementing an experimental programme, even though it may be designed as a randomized experiment. These three caveats are the evidence in their argument that there are other important factors besides randomization which ought to be considered when judging the validity of outcomes in evaluation studies.

2.2.7 Summary: Methodological Issues Inherent in Field Research

A number of key issues were discussed as follows:

a) While randomization is seen to be very important in research designs, there are a number of obstacles to ensuring randomization in field research.

b) Because of some of these problems, it is valid to adopt alternative research designs (quasi-experimental) as long as one is aware of the possible threats to validity, and tries to overcome them.

c) With respect to evaluation per se, one position being articulated in the literature is that even if one can randomly assign subjects in evaluation, this, in itself, does not ensure the valid generalizability of results. Three methodological caveats were presented and discussed to demonstrate that, in evaluation research, there are other central issues besides randomization.

2.3 THE CASE STUDY FRAMEWORK

There is another framework into which particular investigations or evaluations may be placed. This is the case study framework, one which until recently the social sciences have not taken seriously. According to Yin, however, the case study is appropriate for the situation where "a how or why question is being asked about a contemporary set of events over which the investigator has little or no control." (p. 20).

The next relevant point to be made is to do with how a case study approach can be useful in such situations. As Yin (1984) points out, while randomization may attempt to eliminate reasonable rival hypotheses by not stating these hypotheses specifically, classic experimental design (in the physical sciences) does specify the rival hypotheses. The case study method, because of the limitations inherent in the resources available to collect comparative data, has to specify rival hypotheses and may be able to do so by appropriate treatment of the data.

The case study strategy can include the gathering of both quantitative and qualitative data. The process of data collection is governed here by three important principles:

a) allowing multiple sources of evidence, i.e. information from two or more sources, all converging on the same set of findings.

b) a case study data base, i.e. a formal collection of data distinct from the final case study report.

c) a chain of evidence, i.e. explicit links between the questions asked, the data collected and the conclusions drawn.

2.3.1 Relevance to the HETA Programme

Although at the time of the HETA programme (1978) the evaluation itself was not conceived in these case study terms, in restrospect its design is utterly consistent with a case study streategy. The researcher had little or no control over events in the programme and the evaluation certainly aimed to ask how and why questions. With respect to evaluation and the case study, Yin (1984) has this to say

> "and finally, yes, case studies have a distinctive place in evaluation research (see Patto, 1980; Cronbach et al. 1980; Guba and Lincoln, 1981; Data in print). There are at least 4 different applications. The most important is to explain the causal links in real-life interventions that are too complex for the survey of experimental strategies. A second application is to describe the real life context in which an intervention has occurred . . . " (p. 25)

The present report will initially present the methodology used in the initial evaluation and the subsequent data analysis, in the terms of quasi-experimental design. Subsequently, however, due to the inherent shortcomings in the quantity of data which could be analysed, an attempt will be made to examine the data from the perspective of a case-study analysis, so that some more points about this evaluation in particular may be made.

CHAPTER 3

THE PSYCHOLOGICAL LITERATURE AND THE DISABLED

3.1 INTRODUCTION

As mentioned in the previous chapter, the psychological literature on the disabled was consulted to find direction regarding the evaluation of the HETA programme. It became quickly apparent that the only major literature concerned itself primarily with the effects of disability and the adjustment of the disabled. Although this literature gave little direction with respect to self concept, vocational maturity and independence skills, it will be briefly reviewed to underline the main theme of this thesis: the problems of theory and research within a specific domain of psychological practice. The author will focus on this theme by pointing to the problems in the adjustment literature and the literature on the specific variables of self concept, vocational maturity and independence. This will be done in terms of both the theoretical and empirical research as well as from the point of view of their integration. This chapter, then, will consist of:

1. Theories and empirical data on adjustment of disabled;
2. Theories and empirical data on self concept, vocational maturity and independence.

3.2 THEORIES AND EMPIRICAL DATA ON ADJUSTMENT OF THE DISABLED

3.2.1 General Comment

This literature, as mentioned before, is problematic in a number of ways. The author will provide a general context by describing some of the more general difficulties of the theory and the research that the reader may expect to find in considering the theories and studies when they are presented.

1) There are three major theories which emerge; two of these (psychodynamic and Social Role Theory) present maladjustment as an inevitability, a position which finds some support in the empirical data. The third theory (Somato Psychology) refutes this argument and in fact postulates the opposite, for which there is also empirical support. However, only one out of the three theories was actually formulated with the disabled in mind. That is, Somato Psychology was concerned specifically with the disabled, while concepts from Psychodynamic and Role Theory were simply extrapolated and applied to the disabled.

2) All of these theories were articulated with little, if any, reference to empirical data, when referring to the question of adjustment in the disabled. There seems to be little refinement or development of ideas relating directly to adjustment in the disabled, which makes it difficult for one to postulate specific hypotheses beyond whether or not maladjustment is seen to be inevitable.

3) The three theories are conceived at quite different levels and from different vantage points. Psychodynamic Theory comes from assumptions regarding internal and individual processes, Social Role Theory describes behaviour in contextual terms, and Somato Psychology seems to be a blend of the two. In that these three theories do take different positions vis a vis the maladjustment question, it is difficult, if not impossible, to reconcile the different assumptive bases of the respective theories. One is left with the question: Which theory should one believe?

4) It is at this point that one is logically directed to the empirical literature, but unfortunately, it could be argued that empirically, as much evidence can be found to support the maladjustment view, as can be found to support the opposite view. However, in that most of the studies (but not all, as

will be shown later) are contaminated with fairly serious methodological problems, one is once again faced with the question: What should one believe?

5) The one set of studies which do not suffer from methodological limitations also do not actually stem from any major theoretical position regarding the disabled (who were only a sub group in the whole study). Nevertheless, it is possible to generate a few quite specific hypotheses which intuitively also make sense regarding the adjustment of the disabled.

6) As well as the methodological difficulties found in the specific studies described in this chapter, there is the more general question of methodological problems which may be inevitable and unsolvable when doing research in the field, as referred to in Chapter 2.

Having provided a general perspective and context regarding the problems of theory and research in the literature regarding the adjustment of the disabled, let us now proceed to a presentation of these theories and empirical research, in order to demonstrate specifically the points made above. The author will start with discussion of Psychodynamic and Social Role Theory, which both predict maladjustment in the disabled; the related empirical research will also be presented. This will then be followed by discussion of Somato Psychology and the relevant empirical data, which supports the non maladjustment view.

3.2.2 The Maladjustment View : The Theories and their Problems

As mentioned before, neither Psychodynamic nor Social Role Theory were designed with the disabled in mind and may be seen to be limited because of this. In that their main focus is not the disabled, there are really only a few concepts from these theories that are extrapolated and made to fit the situation of the disabled person. This then is the main problem with both these theories, as they address themselves to the issue of adjustment in the disabled. Let us

now proceed to a brief presentation of Psychodynamic and Social Role theory and their treatment of the question of adjustment in the disabled.

Psychodynamic Theory

Psychodynamic Theory, as articulated by Freud, focuses its attention on the role of the family in the shaping of the personality and adjustment of the child. It also emphasizes the importance of inborn instincts and irrational unconscious processes, which are seen to contribute significantly to psychopathology. The author could find only two contributions in the literature which are framed in psychodynamic terms and refer directly to the disabled individual. They are those of Meng (1938) and Adler (1927).

1) Meng

Writing in the 1930s, Meng outlined a number of ideas regarding various aspects of the disabled child's development and adjustment. His thoughts can be summarized thus:

i) Because of the physical limitations that the handicap imposes upon the disabled child, he/she is often unable to engage in normal play activities. It is through play that understanding of reality develops, so the physically disabled child then is thought to have little basic understanding of reality.

ii) Meng also stresses his notion of "over-compensation". For Meng, the handicapped child comes to feel inferior and unconsciously over-compensates so as to gain psychic stability. This sense of inferiority may have its roots in parental over-protection; or in society's condescending attitude towards the handicapped individual. (Adler, whose ideas in relation to the handicapped will be discussed in the next section, postulated that inferiority feelings were common to all, and that they stemmed from the child's smallness and dependence in early childhood.) Over-compensation then, is seen as a sign of neurosis and maladjustment.

iii) Meng points to the importance of the relationship between the child and his parents. The handicapped child experiences ambivalence towards his parents in that he sees them as the source of both his handicap and the solution to his handicapped situation. This ambivalence results in conflict within the child, and if unresolved, will lead to maladjustment.

It can be seen then, that Meng's position points quite clearly to maladjustment developing in the handicapped child. Firstly, handicap itself is seen as inhibiting important aspects of development in the child, and secondly, the child's reaction to both his parents and his own condition must be maladaptive.

2) Adler : Individual Psychology

Alfred Adler's "Individual Psychology" (1927) is often mentioned by reviewers when discussing the impact of physical disability upon adjustment. The ideas relevant to our discussion here are as follows:

i) Inferiority Feelings: Adler (1927) postulated that organic or constitutional inferiority is basic to man's striving to cope with the world in which he lives. Thus, it is seen to be quite natural to experience inferior feelings, which Adler traces to early childhood and the child's smallness and dependence in a world of adults.

Within this framework, however, a distinction is made between normal and abnormal inferiority feelings. Essentially, abnormal inferiority feelings are attributed to children born with physical problems, who are seen to strive to compensate for these feelings much more than normal children. This brings us to the next concept of relevance in Adler's theory.

ii) Compensation: According to Adler (1927) as a way of dealing with his inferiority feelings, the individual may either be led to constructive achievement or to a neurotic power drive. When referring specifically to disabled children, Adler considers that the possession of damaged

organs acts to lower the self esteem and raise the disabled child's psychological uncertainty. In trying to raise his own value, the disabled child responds in a neurotic and psychotic way. Quite clearly then, this theory points to a high incidence of maladjusted tendencies in individuals with a physical disability. It implies that because of the marked feelings of inferiority, the development of the disabled child is affected such that maladjustment can be confidently predicted.

Social Role Theory

The next theory to be presented is Social Role Theory which, in contrast to Psychodynamic Theory, has a totally different set of basic assumptions. Behaviour is seen in terms of interaction between the individual and his wider social context, rather than from the perspective of internal processes and the influence of early life experiences.

The ideas relevant to the disabled which Parsons (1951) postulated are as follows.

Society's values are such that sickness is perceived by society as an undesirable state, and health as a desirable state. People falling into the sick or the healthy category are expected to act out particular roles. The behavioural presumptions of the "sick" role are fourfold:

1) the sick individual is exempt from social responsibility, i.e. he is not seen as a responsible member of society and is not held accountable as such.
2) he cannot be expected to take care of himself, i.e. he is seen as being helpless.
3) he should <u>wish</u> to become well because health is a valued norm in society; his illness or disability is conditionally sanctioned contingent upon his recognition that his "ill" state is undesirable.
4) he should seek medical advice and co-operate fully with the experts.

While this is not a theory of adjustment per se, these behavioural presumptions could be seen as implying the inevitability of maladjustment. After all, the world sees disability as an undesirable state, the disabled individual is expected to be helpless, he is trapped by knowing that the disability will not disappear but is expected to wish it to disappear and, finally, he is seen as having little ability to be responsible for himself. All of these could be seen as providing a great deal of conflict for the individual, both internally and in his interactions with others. This framework, as articulated in 1951 by Parsons, implies, rather than explicitly predicts, maladjustment.

Parson's (1951) belief that Role Theory provided an ideal model for evaluating the reciprocal interaction of the disabled and non-disabled, may have been a response to the increasingly forceful challenge of the Somato psychologists. During the 1950s, these theorists began undermining the long-held belief that maladjustment in the disabled was inevitable, and in this way also undermined the value of the psychodynamic theories when discussing the disabled. If Parsons' view that Social Role Theory provided a useful framework with respect to the disabled was, in fact, a reaction against the relevance of Psychodynamic Theory for the disabled, his conclusions are, in fact, the same. He later hypothesized (1958) that the severity of the disability would be directly related to the degree of individual psychopathology expressed by the disabled person. This particular hypothesis is disputed in the later literature by a number of contributors (Wright, 1960; English, 1968; McDaniel, 1969).

3.2.3 The Maladjustment View : The Studies and their problems

Although the two theories discussed above do not include empirical data to support their hypotheses about maladjustment, there are, nevertheless, a number of studies which do address themselves to this question of adjustment in the disabled. However, as with the theories, there are fairly important difficulties which will provide a context for the reader and are as follows.

1) The majority of studies do not seem to stem from any integrated theoretical position regarding the question of adjustment in the disabled. Rather, they seem to be based on an implicit theory that predicts or disputes maladjustment in the disabled. This makes it difficult to interpret results and take further directions from them.

2) Many different disabilities are included in samples, which makes interpretation difficult. The functional and social consequences may be significantly different in a number of these disabilities and thus affect generalizability of results.

3) As well as the inclusion of different disability groups, different definitions of "maladjustment" are also employed. These definitions range from excessive feelings of fear and guilt (Cruickshank, 1951) to psychiatric disturbance (Rutter, 1970a, 1970b). This lack of consistency adds to the difficulty of interpretation.

4) Many of the studies are riddled with specific methodological problems related to design. With respect to the studies which purport to show maladjustment in children with cleft palate, the tendency has been to treat this particular sample of disabled children as a heterogeneous one, irrespective of the variety of types and severity of clefts involved and regardless of other factors such as the age, sex, and socio-economic status of the subjects. In that these factors could affect outcomes, they should be considered more frequently.

5) Another problem with this research is the question of the extent to which the study samples are representative of individuals with that particular disability. The studies of people with cleft palates, for example, consist fairly typically of individuals attending rehabilitation centres, speech clinics and so on. Little or no comparison is made with those individuals

with cleft palate who do not attend these centres. This lack of information may also bias results and once again affect their generalizability.

6) The form of data collection may also present further problems for interpretation. Many of the research studies of psychosocial aspects of cleft palate (again taken as an example) have had to rely upon the retrospective reports obtained from parents through interviews. It has been reported (Huggard et al. 1960) that such retrospective reports even by parents of physically healthy children, are somewhat unreliable over time with the recall of anxiety arousing events; less reliable than recall of so-called "hard facts" such as age of walking, for example. The general usefulness of retrospective reports of emotional reactions must thus be questioned.

7) A final point to be made before presenting the studies which hopefully will demonstrate the difficulties discussed so far, is that overall there seems to be a mix of comparative studies, observational studies and studies without control groups. There is only one group of studies which, in the author's view, are convincing both methodologically and conceptually. These are the Rutter and Seidel studies which, because they overcome many of the problems listed above, will be given comparative prominence in the section below.

The Studies Themselves

Before proceeding to these studies, however, it must be pointed out that they are not overtly based on the two theories predicting maladjustment which have been discussed to date. Rather, as mentioned before, these studies are essentially based on an implicit theory that predicts or disputes maladjustment in the disabled.

The first of the studies referred to above is an epidemiological study conducted on the Isle of Wight (Rutter et al., 1970a, 1970b). The total population was first studied by means of multiple screening procedures. After this, various

groups were selected for intensive study by means of neurological examination, psychological testing, psychiatric interviews with the families, teacher reports, and psychiatric interviews with the children. In this way, it was possible to obtain accurately diagnosed groups of children with different disabling conditions. It is only three of these groups which are relevant to our discussion here.

The first group, the neuro-epileptic, consisted of children aged 5-14 years with cerebral palsy, epilepsy or some other overt disorder above the brain stem. The second group, the other physical handicap group, consisted of 10-12 year old children with chronic handicapping physical conditions which did not involve the brain, e.g. asthma, diabetes, heart disease, orthopaedic deformities and disease of the spinal cord or peripheral nervous system (e.g. polio). The third group, the psychiatric disorder group, included 10-11 year old children with an emotional or behavioural disorder which involved some type of persisting social impairment, i.e. it did not include merely odd children or those with transient or mild problems.

Because these groups were studied in the same way with the same standardized instruments, the data allowed detailed investigation of how many neuro-epileptic children also had a psychiatric disorder, together with an appraisal of whether this rate was above or below that in the general population or in any other handicapped group. In fact, results of this analysis show that approximately 6-7% of the general population had psychiatric problems whereas the rate in the children with chronic physical handicaps not involving the brain was nearly twice that. However, the rate in the neuro-epileptic group was much higher in that about a third of these children had psychiatric disorders. Rutter concludes that these findings suggest that "brain damage was associated with a particularly high rate of psychiatric disorder" (1977, p. 3).

In drawing this conclusion, however, Rutter considers a number of methodological questions affecting the confidence with which such a conclusion

may be drawn. The first is the question of whether or not differences may be due to rater bias. This is excluded as a possibility, because the raters were made blind to which group the children were in. Secondly, it is possible that the differences between the groups could be related to I.Q. differences in that the main I.Q. was much lower in the neuro-epileptic group, and low I.Q. is known to be associated with increased risk of psychiatric disorder (Rutter et al., 1970). As a way of controlling this, Rutter repeated the comparison for the subgroups of children who had an I.Q. of 86 or more. There was still a twofold difference in the rate of psychiatric disorder between the neuro-epileptic group and the "other physically handicapped" group. Thirdly, it was possible that the results were biased by age differences in both groups, in that the age range was greater in the neuro-epileptic group. This apparently was not the case because there was still a high rate of psychiatric disorder in the neuro-epileptic group even when comparisons were restricted to the much narrower age range of the chronic physical handicap group.

Rutter ends his methodological comment by suggesting that it may be that the findings could have been a consequence of the nature of the child's physical disability. The neuro-epileptic group included visibly disabled children with cerebral palsy and epileptic children whose condition is sometimes associated with stigma. Neither obvious disabling nor stigma was common in the "other physical handicap" group. In order to answer this question, another study was conducted specifically to test the hypothesis that the key variables in maladjusted handicapped children was not brain dysfunction per se, but rather both the low I.Q. and visible handicapping to which the neurological disorder gave rise.

Seidel, Chadwick and Rutter (1975) conducted a study with a group of children aged 5-15 years, all of whom had an I.Q. in the normal range. Most importantly, all of these children had a visibly disabling condition: 33 had cerebral disorders (mostly cerebral palsy) and 42 had non-cerebral conditions

(e.g. muscular dystrophy, polio or spina bifida). The groups were matched on age, sex, psychosocial circumstances and degree of physical disability. As in the Isle of Wight study, information regarding these groups was obtained through interviews with the family, teacher ratings, neurological examinations and psychiatric interviews with the children. Data on I.Q. were obtained from existing records, and where this was not available, further testing was carried out.

Analysis of data showed that the rate of psychiatric disorder was twice as high in the group with brain damage than in the other group. However, amongst these children with psychiatric disorders, the problems were varied in type. They were significantly more common in youngsters from an over-crowded household, a broken home, a family with marital discord or with a mother who showed psychiatric problems, which are psychosocial factors that are important in the adjustment of non-disabled children.

In concluding, Seidel et al. take the position that although brain damage clearly increased the risk of psychiatric disorder, his findings (like those of the earlier Isle of Wight study) suggest that whether or not psychiatric disorder actually develops depends largely on much the same psychosocial variables which are important in non-disabled children:

> "It appears that although cerebral damage increases the risk of psychiatric disorder in children, such disorder is not caused directly by brain damage, but rather develops as a result of a combination of increased biological vulnerability and psycho-social hazard." (1975, p. 572)

As mentioned before, it is the author's view that the Rutter and Seidel et al. studies are the only two which argue convincingly in support of the view that some disabled children (in particular, those with brain damage) are likely to be prone to maladjustment. They are methodologically convincing because they screened the whole population, so results could not be attributed to

selective biases associated with clinic referrals. Assessments were based on standardized clinical questionnaire measures of demonstrated reliability and validity, so differences between groups would not be attributed to variations in assessment. Finally, Rutter and Seidel et al. also took differences between groups on age, I.Q. and visibility of handicap into account statistically, and still found that inter-group differences remained even after this statistical procedure.

While the Rutter and Seidel et al. studies show rather convincingly that some disabled children are likely to be maladjusted, they also show that this maladjustment is mediated by psychosocial factors which are also found in maladjusted able-bodied children. Although Rutter and his associates did not base their investigations on the theories mentioned earlier, their data do seem to validate the notion of maladjustment being a necessary consequence of disability.

As a contrast, and in order to highlight the points made regarding the problems of other research which purports to show that disabled children are maladjusted, the following is a brief presentation of these other studies. They will be grouped in terms of the disability being investigated.

1. Cleft Palate

There are a number of studies investigating adjustment of children with cleft palate which support the following statement: "Symptoms of personal and social maladjustment are usually present, both because of defective speech and real or fancied facial deformity" (Backus, 1948, p. 129). This is thought to be so by some personality theorists, especially by those with a Freudian orientation, in that oral activities such as sucking, feeding and chewing are seen to be very important in the development of the child (Prugh, 1956). Since impairment of and interference with such activities occurs frequently in children with cleft palate, it might be expected that these children would experience

fairly major personal disturbance and perhaps even develop some unique personality characteristics.

Tisza et al. (1958) conducted an intensive observational study of 11 children with cleft palate, aged 5 to 8 years. No actual data were presented, however, no control group was used for the purpose of establishing a base line for their comparisons, and no statistical analyses were reported. These children had fairly serious types of clefts involving considerable disfigurement. They were noted by the authoress to show, in comparison to physically normal children, higher levels of muscular rigidity, postural tension, motor activity and distortions in psychomotor tasks. A reviewer of this study considers that "While their interpretations were somewhat guarded, the strong impression left with the careful reader is that these children were rather maladjusted and disturbed, requiring psychiatric care for their emotional problems" (Goodstein, 1968, p. 214).

Gluck et al. (1965) compared the clinical records of 50 children with cleft palate seen at a cleft palate research centre, with those of 292 children with behaviour problems seen at a child guidance centre. They reported that the children with cleft palate had more physical anomalies and chronic illness (which one might expect). They were also, however, seen to be more shy and enuretic than the children from the child guidance centre. Once again, these authors did not report on any control group, and although the evidence is far from clear, they concluded that the children with cleft palate show evidence of psychological maladjustment.

McWilliams and Musgrave (1972) undertook to discover whether or not psychological factors are related to speech performance. One hundred and seventy children with cleft palate (aged 3 to 16 years) were divided into 3 groups on the basis of articulation difficulties and voice quality. As well as rating these children on an intelligibility scale, I.Q. tests were administered, and the mothers, as part of a comprehensive case history, were questioned

about the presence or absence of 28 behavioural characteristics. The authors claim that these characteristics were not selected with a view to developing a list of behaviour typical of cleft children, but rather were included because they represented problems frequently found in childhood.

The 10 symptoms reported most frequently across the 3 groups included nervousness, excitability, bad temper, restlessness, bed wetting, difficulty in disciplining, fearfulness, moodiness, preferring to be alone and nail biting. A comparison was made between groups and results indicated that a number of symptoms were outstanding in Group 2, i.e. the children who had normal tone but had problems with articulation which were not thought to be related to the physical problems of the cleft palate. Those children were more frequently fearful, and wet the bed more often, than did either the children in Group 1 or 2, i.e. the good and poor speakers.

In summary, the results indicate that children with normal voice quality and no articulation errors (Group 1) have no outstanding behavioural characteristics. Children with normal voice quality and articulation errors (Group 2) have more behaviour symptoms (especially fearfulness, bad temper and bed wetting) than their normally speaking counterparts. Children with hypernasality (Group 3) have more behaviour symptoms than the normal speakers, and show no single outstanding behaviour characteristic. That is, while Groups 2 and 3 both had more behaviour symptoms that the normal speakers, it was the children in Group 2 who had articulation problems not seen to be physiologically based, that were more fearul, and wet the bed more than children in either Group 1 or 3.

While the authors do not make statements regarding maladjustment per se, they believe their results support the view that with some cleft palate children, their speech difficulties are psychological rather than physical.

2. Short Stature

Investigating another disability, Rotnem, Genel and Hintz (1973) ran a study dealing with children with hypopituitary short stature. They assessed, by interview, observation and projective testing, the personality and social development of 14 children with this disability, and an age and sex matched normal control group. They reported that the children with the growth hormone deficiency:

a) saw themselves as surrounded by large peers and seemingly huge adults, and felt endangered physically and psychologically;

b) fantasized that being older meant being stronger, bigger and more competent;

c) experienced disturbances in self esteem, which results from repeated instances of social rejection or failure in reaching goals;

d) often retreated from situations considered dangerous, rather than responding with aggression.

The authors conclude that these children's emotional difficulties are related to a number of factors: the way in which short stature elicits behaviour from others appropriate to younger children; the child's sense of guilt for the disability; parental over-protection and increasing disparity in size from peers. They consider that the results of their study are consistent with earlier clinical observations of difficulties with identity and personality formation in children with this disability (Drash et al., 1968; Matson, 1972; Money & Pollitt, 1968; Pollitt & Money, 1964).

3. Cerebral Palsy

Wenar (1953) investigated children with yet another disability, cerebral palsy. He was interested in exploring the effects of motor handicaps on certain aspects of the child's personality. This was based on the view that motor

difficulties should in fact present problems which affect the child's entire personality.

The subjects were 12 children with no motor handicaps, 12 with a mild motor handicap (cerebral palsy) and 12 with a severe motor handicap (also with cerebral palsy) aged 8-10 years. The degree of handicap was rated by an examiner's observation of the child and by the number of pegs the child could place in a pegboard in a 20 second interval. In addition the able-bodied children were not especially chosen as being well adjusted.

In that Wenar was particularly interested in testing the hypothesis that the goals which a handicapped child sets for himself differ significantly from those of a non-disabled child, his subjects were given a level of aspiration task involving 5 trials of putting pegs in a pegboard. Results showed that there was no significant tendency for the disabled groups to set higher or lower goals for themselves when all 5 trials were combined. However, there was a significant change in pattern of goal setting from trial to trial, in that the non-disabled group progressively lowered their level of aspiration, in contrast to the disabled group who at first lowered their level of aspiration and then set higher goals as the task was continued. The author concludes that the disabled child is able to maintain a realistic attitude towards his ability for only a limited period of time. Under pressure, however, the attitude changes to a wishful one of what the child would like to be able to do, rather than what he is capable of doing. Once again, it is implied that the results support the view that the disabled child is maladjusted in this way.

Cruickshank (1951) conducted a study based on the view that fear is an important barrier to the successful adjustment of children, both disabled and non-disabled (Broida et al., 1950; Temple & Amen, 1944). He administered a Projective Sentence Completion Test to 264 disabled children and to a group of non-disabled children, who were matched on age and sex variables (we are

not told the age range of the children in the study). There were 3 main disabilities represented in this group of disabled children. They were cardiac conditions, poliomyelitis, and cerebral palsy. In comparing the two groups' responses, Cruickshank concludes that the disabled children see themselves as having more fears and more feelings of guilt than do the non-disabled children. On the basis of his results, he considers that these feelings are related directly to the poor social adjustment which disabled children feel they make and which Cruickshank says is reported elsewhere. It might be pointed out that the reference made to other reports of poor social adjustment is to another study by Cruickshank (Cruickshank & Dolphin, 1949).

3.2.4 Summary

a) A considerable number of difficulties in both the theory and empirical work supporting the maladjustment view have been identified.

b) These difficulties are to do with the theories being articulated from quite different vantage points (i.e. Psychodynamic and Social Role Theory), significant conceptual and methodological problems in the studies and, finally, a lack of integration between the theory and research presented to date.

c) One set of studies overcomes these problems both methodologically and conceputally and, in fact, is convincing in its prediction of maladjustment for those disabled children with brain damage and who come from particular social/familial contexts.

Having discussed the problems of theory and research in the literature supporting the maladjustment position, let us now proceed to the literature which argues against the inevitability of maladjustment.

3.2.5 The Non-Maladjustment View : The Theory and its problems

The main difficulty with summarizing or describing Somato Psychology is that there seems to be no integrated set of principles governing the ideas generated. In addition, different reviewers seem to emphasize different aspects of the theory; some reviewers of theories governing adjustment to disability do not even mention Somato Psychology although they may refer to specific notions which come from the theory (English, 1968). For the purposes of this discussion, however, the author will present the ideas considered to be central by a few authors who refer to Somato Psychology when discussing theories regarding adjustment of the disabled. It will become clear that

a) different concepts are seen as being important, and

b) these different ideas are articulated at different conceptual levels. Some are framed interpersonally, some individually, and some in a much broader social and societal framework.

The first author to be considered is Wright, who defines Somato Psychology as concerning itself with "the way in which the person with a disability copes with its social and personal connotations, these being aroused by the fact that the disability imposes certain limitations and is felt as a loss or denial of something important" (Wright, 1960, p. 2). It is essentially social psychological in nature and originally stemmed from the work of Kurt Lewin and Field Theory.

There are two beliefs here which lay the foundation for the argument that the disabled are not inevitably maladjusted; firstly that there are far fewer experiences peculiar to people with disabilities than may be generally thought. It is thought that the psychological and interpersonal consequences of being disabled result in experiences with which many people are conversant. For example, the psychological significance of blindness has to do with such things as threat of social isolation, the struggle for independence, acceptance

of a personal limitation and so on. These experiences are common to many of us, even though being disabled clearly is not.

The second idea is that a distinction is drawn between being physically impaired or disabled, and being in some way disadvantaged psychologically by that impairment or handicap. This is so in that

> "a physical attribute is a physical handicap only when it is seen as a significant barrier to the accomplishment of particular goals. This means that, in the individual case, a physical disability may or may not be a physical handicap. This is also true of a physical attribute that is not a deviation. Moreover, a physical attribute may become handicapping not because it is physically limiting but because it adversely affects social relationships."
> (Wright, 1960, p. 10)

In other words, the experiences of the disabled are not necessarily unusual or abnormal compared to the non-disabled. Being disabled does not have to be automatically problematic. It is so only insofar as it interferes with the individual's accomplishment of particular goals. Because individuals vary so greatly, the implication is that generalizing with respect to predicting maladjustment is invalid.

Cruickshank (1955) refers not to Somato Psychology but to Field Theory, which as mentioned earlier, was elaborated and applied to the disabled in the form of Somato Psychology by Barker et al. (1946, 1953) and by Wright (1960). Cruickshank (1955) begins by asserting that in his view, basic adjustment problems of the handicapped child are the same as those of children of comparable chronological and mental age with normal physical development. He identifies two kinds of adjustment problems that can occur:

a) those which may happen for any person aiming for self development and maintenance of an already developed self concept, and

b) those which come solely from the fact that the physical disability is inserted between a goal, and the individual's desire to achieve that goal.

In Cruickshank's view, failure to recognize this or conceptualize disability in this way can lead to the assumption that all personality problems of disabled children are an inherent part of being disabled. He considers there to be two main concepts: new psychological situations, and overlapping psychological roles.

New Psychological Situations

New psychological situations are situations which are unfamiliar to the person. The individual upon entering a new psychological situation does not yet know the goals of the situation, nor how to attain them. As a result of this, trial and error behaviour occurs in an attempt to achieve goals; frustration is experienced when goals are not achieved. In addition, the individual may suffer a conflict between desire for a now known goal or purpose, and repulsion of new, perhaps frightening, behaviours needed to achieve that purpose.

It is contended, within this framework, that the disabled individual is more often placed in such "new psychological situations" because of the personal and social ramifications of being handicapped. For example, children are often curious about the obvious physical differences in others, and may ask direct questions of a handicapped person about his condition. This would be a "new psychological situation" that a non-disabled person would not encounter.

There are three kinds of "new psychological situations" that may be met by the handicapped individual. Firstly, situations which are new because the person has never experienced them before due to his life experience, like the example given above of curiosity of children. Secondly, situations which are new because the person does not have the behaviours appropriate for the situation. For example, coping with environmental demands like lack of wheelchair access to public places. Thirdly, new situations which specifically involve public reactions to disability, like people staring or behaving in an embarrassed way with a handicapped person.

According to this framework, maladjustment can occur as a result of excessive exposure to such new situations, if the handicapped individual has not learned how to deal with these situations; that is, if he has not learned how to achieve his goals in new situations.

The second important concept relevant to our discussion is that of "overlapping situations". This term refers to the demands made upon the handicapped individual essentially to exist in two different worlds. The one is the world of the non-disabled majority, and the other, the special psychological world that a disability can create for a handicapped person. Each of these worlds has different behavioural expectations or roles, and although many activities are common to both worlds, there are some which primarily disabled persons engage in, and others which are open to physically normal people.

Duality of roles, however, is not in itself a source of difficulty. It is when those roles are incompatible that conflict and disturbances occur. Although within this theoretical framework there is identification of different kinds of overlapping situations, the one which is most important with respect to the handicapped person is the "overlapping excluding situation".

Overlapping Excluding Situation

The "overlapping excluding situation" refers to a person aiming for roles within the social structure that he cannot attain or at least that are relatively inaccessible to him. A pertinent example is that of a disabled teenager with poor hand control aiming to work as a typist. It is further postulated that, if a person continues to have these kinds of unrealistic aims, disturbance will occur. In other words, the greater the striving towards a goal which is unobtainable because of ability or social barriers, the greater the psychological maladjustment.

McDaniel (1969) in discussing Somato Psychology considers the main tenet of this approach to be that physique and behaviour are interrelated and mutually dependent. Behavioural incapacities and social rejection place the disabled in

a subordinate position where many goals are inaccessible. He refers to four ideas as being very important: mourning, denial, devaluation, and spread. In very brief terms, mourning or depression about a lost function or body part is inevitable and equated with the realization of the reality of the loss. It is seen to facilitate recovery and the ultimate acceptance of the disability. Denial is the antithesis to mourning and in fact interferes with rehabilitation. It can manifest itself by the person distorting or rejecting harsh facts of reality. Devaluation of the person with the disability occurs as a result of the attitude of others towards the disabled, as well as because of the disabled person's lowered self esteem. Devaluation manifests itself in (a) societal prejudice against the disabled similar to that shown to other minority groups; (b) societal prejudged helplessness and dependency of the disabled; (c) societal attitude of either overprotection of, or rejection of, the disabled. Spread refers to the idea that often society and the disabled person himself sees the disability going beyond the actual limits of the impairment, i.e. a generalization of incapacity occurs. That is, rather than being seen as a person with, e.g. paralysed legs, the disabled person is seen as being generally incompetent or impaired.

Yet another reviewer, Shontz (1977), refers to the work of Wright (1960), Barker et al. (1946, 1953) as "Interpersonal Theory". Shontz summarizes their import thus:

> "These theorists regard the body as a value impregnated stimulus to the self and others. They trace the self concept and personal values back to a primary source in interpersonal relations, particularly to evaluation by others. This group of theorists has generated and applied a number of useful descriptive concepts such as spread, value loss, containment of disability effects, comparative and asset values, expectation discrepancy, new and overlapping situations." (1977, p. 107)

The author will not explain all of these notions, some of which are mentioned by Cruickshank (1955), e.g. new and overlapping situations, and McDaniel (e.g. spread). Once again, the author is struck that this theory is not only referred to differently by different writers, but also different aspects or notions are identified as being important. In summary, the author would say that the essential features of Somato Psychology are:

a) it is a social psychological theory stemming from Lewin's Field theory;

b) it rejects the proposition that maladjustment is inevitable for the disabled individual;

c) it has generated a number of descriptive concepts addressing the experiences and adjustment process of the disabled.

3.2.6 The Non-Maladjustment View : The Studies and their Problems

The methodological problems in reviewing the studies which do not support the maladjustment thesis are similar to the problems found with studies which do support the thesis (discussed earlier). Not only is adjustment defined differently from study to study, but different disability groups are examined with different kinds of studies, ranging from those with controls to case studies. As mentioned before, it is rather difficult to make sense of a literature which consists of studies which differ so markedly in extent of methodological rigour. In addition to these difficulties, Barker et al. (1953) point to the chief methodological problems in Somato psychological research as being:

a) selecting representative subjects and securing adequate controls;

b) the lack of instruments for measuring physical disability;

c) lack of appropriate tests for assessing behaviour and personality difficulties.

The Studies Themselves

As with the studies discussed above, the quality and approach of the empirical work supporting the non maladjustment view, is just as varied. For example, there are studies of children with cleft palate taking the non maladjusted view (Sidney, 1951; Palmer & Adams, 1962; Kiress, 1965; Corah & Corah, 1963; Watson, 1964; Richman & Harper, 1978) as well as studies of children with scoliosis andosteomyelitis which also show no evidence of maladjustment (Kammerer, 1940). However, rather than describe them all, it may be more concise now to refer to reviewers of these studies and the conclusions they draw. The first to be mentioned is Wright (1969) who contends that there are a number of myths about disability, one of them being the "Myth of General Maladjustment". Wright's position is essentially this:

> "There are literally hundreds of studies dealing with this question. Yet the results, no matter how they are ordered, cannot be made to favour the non-disabled group with even moderate consistency. To be sure, some studies show that the able-bodied have more mature and constructive personalities, but other studies show the reverse. It is true that a sheer frequency count would yield a large number of studies in the column favouring the able bodied, but so often the results of such studies can be attributed to experimental artifact if not artifice." (p. 91)

In Wright's view, the empirical literature tends to focus around two areas: (1) the frustration hypothesis, i.e. that disability inevitably leads to excessive frustration which leads to maladjustment, and (2) effects on personality, i.e. that the more severe the disability, the greater the maladjustment and, certain disabilities produce certain personality types. It is unclear to the author where these hypotheses stem from; the only familiar one is that which refers to the severity of disability affecting degree of maladjustment (Parsons, 1958; and Social Role Theory). Furthermore, Wright throws no light on the question of the origin of these hypotheses. She simply cites studies investigating frustration,

with a view to showing that overall they do not support the maladjustment view. As before, different disability groups act as subjects, different instruments to measure change are used, and different designs employed. In order to present Wright's position, the author has organized these frustration studies around the following specific hypotheses:

1) that disabled children have a lower frustration tolerance than non disabled children;
2) that there is a difference in response modes to frustration between disabled and non disabled children;
3) that disabled children experience more frustration than non disabled children.

1) Frustration Tolerance

While Smock and Cruickshank (1952) conclude that their disabled subjects showed a significantly lower frustration tolerance than their non disabled subjects, there are other studies which in fact do not support this conclusion. For example, Kahn (1951) investigated three groups of children: a group with normal hearing, a moderately hard of hearing group, and a severely hard of hearing group. The subjects were equated on age, sex, school grade, socio-economic status, and I.Q. The Rosenzweig Picture Frustration Study was administered, and the main findings were that few differences existed between the groups. The author considered that, if anything, the results indicated a consistent tendency (though slight) for the hard of hearing children to meet frustration more constructively than the non disabled children. Lange (1959) also administered the Rosenzweig Picture Frustration test to 80 students at a hospital school, half of whom had been born with their handicap and half of whom had acquired their handicap. The age range was 5 to 21; results showed no significant differences in frustrative reactions between the two groups.

Yet another, far more recent study was conducted, which also used the Picture Frustration Study, as its main tool for investigating how handicapped children managed frustrating situations. Lynch and Arndt (1973) compared the responses of handicapped and non-handicapped children, dividing their subjects into three age groups: 6 years, 8 years and 10 years old. Their results also did not support the findings of Smock and Cruickshank (1952). On the contrary, their results showed no difference between the handicapped and non-handicapped children in level of frustration tolerance. Both handicapped and non-handicapped children used the extrapunitive response in dealing with frustration.

However, one significant difference was identified. The 6-year-old handicapped children were more likely to deny or minimize frustration than were their non-handicapped controls, while at 10 years old, the handicapped subjects were more likely to be intro-punitive (self blaming) than their non-handicapped counterparts. In essence, then, results here indicate that the handicapped children as they grow older, tend to use the intro-punitive method of dealing with frustration, more so than non-handicapped children at that age.

Fitzgerald (1950) compared two groups of orthopaedically handicapped adolescents who were moderately and severely handicapped, with a non-handicapped group. Subjects were asked to perform physically frustrating tasks and after interviews, it became apparent that reaction to frustration, contrary to expectations, was not differentiable on grounds of physical status. Instead, the ability to perform tasks under stressful and frustrating conditions, was more closely related to personal feelings and attitudes about home than to status as a physically handicapped or physically normal adolescent. Fitzgerald (1950) concluded that low frustration tolerance is not necessarily significantly associated with the handicapped condition; other variables play a more prominent part in an individual's ability to cope with frustration.

2) Response Modes to Frustration

Lynch and Arndt (1973), in discussing their findings, pointed to a change in response modes to frustration of handicapped children as they grew older. This was the adoption of a self blaming attitude as a reaction to frustrating situations. Kahn (1951) found that the most severely handicapped children in his experiment tended to blame the environment as a means of dealing with frustration; again this was not evident in either the less handicapped or non-handicapped subjects. Wenar (1953), in comparing a group of moderately and severely handicapped children with a non-handicapped control group, found the following difference. The handicapped children maintained a realistic attitude towards their capabilities for a limited period only. They reacted to frustration and failure by setting themselves an even higher goal, while the non-handicapped group lowered its level of aspiration.

There is some evidence then, to suggest that differences in response modes to frustration situations are apparent when comparing handicapped and non-handicapped groups. It cannot be said though, that the handicapping condition is the only major contributor to such differences. There seem to be differences within handicapped subjects themselves, such as age and degree of disability (Lynch & Arndt, 1973; Kahn, 1951).

3) Level of Frustration

Wright (1960) refers to basically two studies in her argument that the assumption that persons with disabilities are more frequently frustrated than the non-disabled is essentially untrue.

Shere (1954) conducted one of the few systematic twin studies to be found in disability research. He studied the parent-child relationship of 30 pairs of twins, one of whom in each pair was a cerebral palsied child. The children ranged in age from $1\frac{1}{2}$ to 16 years; the group included approximately the same number of identical twins, like sex fraternal twins, and boy-girl twins. The

disability of the twins was judged to be mild to moderate, considerable and extreme. Again there were approximately the same number of twins in each of these three disability ratings. Shere used a number of rating procedures and summarized his results in a list of behavioural observations. According to Wright, his results indicate that, in fact, the children with cerebral palsy experienced fewer frustrations in their relationship with their parents than did their non disabled twin.

As further evidence that handicapped children do not necessarily experience more frustration than non-handicapped children, Wright cites another study. This one is an ecological study conducted by Barker and Wright (1955) who observed the behaviour of 12 non-handicapped children and 4 handicapped children, throughout one whole day. The children were between 2 and 11 years of age. Wright (1960) acknowledges that the number of subjects is small, but adds that the consistency of the findings point to the reliability and importance of these results:

1) For each of the children there was a relatively low frequency of episodes ending in frustration and failure.
2) For every child the percentage of good endings (attainment, gratification and success) is higher than percentage of bad endings (non-attainment, frustration, failure).
3) There is no suggestion of difference between the non disabled children and those with disabilities; a contention that motor disability necessarily implies more frequent occurrences of bad episode endings is not supported.

Effects on Personality

Wright starts her review of studies in this area with this statement:

> "One might suppose that a stigmatizing underprivileged social position would predispose the individual toward feeling inferior as a person. As a matter of fact feelings of inferiority are mentioned with considerable frequency by experts and laymen alike as characterising disabled groups." (p. 51)

She then continues to cite findings of studies which support the view that there is no association between feelings of inferiority and disability. The credibility of her position is threatened in that details regarding age of subjects, instruments used and so on, are not given.

Siedenfield (1948a) administered a personality test to a group of people with poliomyelitis and scores showed that the disabled group showed a greater sense of personal worth than the able bodied groups on which the test was standardized. Arluck's (1941) study showed that the cardiac and epileptic subjects often actually felt superior to most children in respect to attitudes, feelings and interests than did their normal controls, as measured by a self rating scale. Sommers (1944) also administered a personality test to a group of blind adolescents whose scores were just as high on sense of personal worth as the mean for the standardized population.

Wright also addresses the hypothesis that degree of disability is related to maladjustment. Though she cites some studies which have shown a relationship between degree of disability and poor adjustment (Brunschwig, 1936; Kammerer, 1940; Landis & Bolles, 1942) she states that other studies (Springer, 1938; Donofrio, 1948; Tracht, 1946) have shown no relationship, and still others has shown the reverse relationship (McGregor et al., 1953:70; Miller, 1958).

Wright's conclusions are supported by another reviewer in the field, who comments on studies dealing with a wide variety of disabilities (Shontz, 1970). This reviewer deals with two specific questions regarding adjustment and disability: that disabilities are associated with particular personality types and that the more severe the disability, the more maladjusted the individual. His overall view is that his survey agrees with other literature reviews, in that it shows no evidence to support the hypothesis that many forms of disability are associated with particular personality traits. As well as this, he considers that his review also finds no support of the hypothesis that severity of disability is associated with the degree of maladjustment.

Shontz cites studies dealing with people suffering from kidney and heart diseases, coronary problems, rheumatoid arthritis and obesity. He does not, however, consider the evidence related to other disabilities referred to quite often in the literature (e.g. cerebral palsy, spina bifida, and so on), although he does comment on the methodological problems of a number of these studies. Shontz concludes his summary by suggesting several generalizations which he considers can be drawn from this literature:

a) basic personality structure appears to be remarkably stable even in the face of serious somatic change;

b) illness and disability (regardless of type) produce increases in depression but they do not necessarily raise the level of manifest anxiety;

c) negative emotional experiences such as depression and despair, are sometimes associated with improvement in somatic status as well as with the onset of disability or disease.

3.2.7 Summary

a) A number of difficulties in both the theory and empirical work supporting the non-maladjustment view have been identified.

b) These difficulties relate to an overall lack of governing principles for Somato Psychology with different theorists and reviewers emphasizing different aspects. With respect to the studies presented, once again, the reader is faced with the problems generated by use of different disability groups, differing instruments and different ways of defining adjustment.

c) While an argument could be made that the empirical studies do support the non-maladjustment view (as is done by Wright) the author finds it difficult to identify central strands of integration between the theory and research.

Having reviewed the theories and research on the general adjustment literature to find direction regarding the 3 variables studied in the evaluation, it seems reasonable to say that little direction emerges regarding self concept, vocational maturity and independence skills. Let us now proceed to the literature on these 3 specific variables.

3.3 THEORIES AND EMPIRICAL DATA ON SELF CONCEPT, VOCATIONAL MATURITY AND INDEPENDENCE SKILLS

3.3.1 General Comment

As mentioned in Chapter 1, in that the HETA programme was designed to affect self concept, vocational maturity and independence skills, the evaluation had to take account of these variables. The literature on the psychology of the disabled gave little direction with respect to the importance of these three variables, indeed any variables, which an evaluation of this sort should consider. However, because self concept, vocational maturity and independence skills had already been designed into the programme (by the designers of HETA, not the author) and because respectable instruments could be found to measure these variables, they were included in the evaluation.

As in the previous section of this chapter, the kinds of problems of theory and research encountered in the sparse literature on these three variables is very similar. The theory (when it exists) does not incorporate empirical data to support its contentions and in general is such that it is most difficult to generate specific hypotheses. The empirical data are very limited in terms of quantity, and suffer from methodological problems which lean on interpretation of results. While the literature on self concept, vocational maturity and independence skills is a much smaller one than the literature on adjustment, it is confounded by the same kinds of problems. All in all, it is most difficult, if not impossible, to take direction from it with respect to hypothesizing for the purposes of the HETA evaluation.

3.3.2 Self Concept

Before presenting the theories and empirical data to demonstrate the above points, it may be helpful to provide a context for the fact that the designers did feel self concept was important. The author will then discuss the relevant literature.

i) Why Self Concept?

As mentioned earlier, the group of adolescents for whom HETA was designed were observed clinically to be lacking in self confidence, quite unrealistic in their vocational aspirations and lacking in life independence skills. How is it that these three characteristics were seen to be so important in the first place? In this section, the author will deal with the first, that of self concept, while the other two will be addressed in the following sections.

The clinical conclusion that these youngsters had a poor self concept, was based on observations of these adolescents' social interactions, their comments regarding their own sense of achievement and success in life, and their own reports regarding their sense of self confidence. In the author's view, it makes intuitive sense that the designers of HETA did consider self concept to be important, even though the psychological literature on the disabled does not definitively show this to be an important variable (as will be shown below). The reason is that there is a theory regarding disabled children and adults which a number of clinicians hold to. This is, that the disabled child, virtually from birth, is faced with limited opportunities for achievement and success. This may be so with respect to motor functioning, intellectual functioning and often social functioning. In that most of these youngsters were born with their disability, it makes sense clinically to associate this consistent lack of success in many areas of experience, with a lowered self esteem and affected self concept.

As mentioned above, while this theory is not supported in the disability literature, there is evidence in the early childhood literature that self concept

and achievement are associated. The author will not review this literature in that it diverges from the central theme of this thesis (that of the problems of theory and research), but rather, refer to it as support for the designers including self concept as an important variable. It seems that the early childhood literature, both theoretical and empirical, asserts the following, with respect to self concept and achievement:

a) Numerous investigators have observed a positive correlation between self concept and achievement. Studies done with children after the 1st Grade found that children with learning difficulties tended to see themselves less adequately than those who were doing well. Samuels (1977) cites 28 studies which support this (pp. 103-104 in Samuels).

b) Reading ability has been found to be correlated with self concept in children in years 1 through to 12 (i.e. age 6-17 years), (Henderson & Long, 1965; Zimmerman & Allebrand, 1965; Williams & Cole, 1968; Hebert, 1968; Sears, 1970; Trowbridge & Trowbridge, 1972; Williams, 1973). These studies are relevant in that most of the HETA youngsters had both learning difficulties and problems with reading.

Having argued very briefly in favour of the designers identifying self concept as an important variable to be changed by the HETA programme, the author will now proceed to discuss the variable itself, with particular reference to the difficulties of the disability literature as it deals with self concept.

ii) Self Concept

(1) The Self

The concept of "self" is one which occurs frequently in the psychological literature. It is a central construct in phenomenological theories of personality and in the psychodynamic theories of Adler, Horney and Sullivan. Sometimes the term "self" is used as an object, where the

individual is seen as having knowledge of, and evaluating the self-as-object, in much the same way one has knoweldge of and evaluates another person. Another usage of the "self" is as an agent or process, where the self is said to influence perception and judgement and to screen out threatening or inconsistent information. William James (1893), just before the turn of the century, pioneered this distinction, when he identified these two major aspects of self: the self as subject versus the self as object, and the self as knower versus the self as known. He referred to these two aspects as the I versus the Me.

(2) Definition

A variety of definitions for self concept may be found and, in general, may be seen as referring to the way an individual perceives himself. Kinch (1963) defines the self concept as being "that organisation of qualities that the individual attributes to himself" (p. 481). Samuels (1977), however, considers that it is helpful to discuss self concept in terms of its important dimensions. These are body self (or body image), cognitive self, social self, and self esteem (which is the evaluative aspect of the self concept) (Sarbin, 1952; Smith, 1960; Horrocks & Jackson, 1972).

(3) Development

The development of the self concept is another area which is given considerable attention in the psychological literature. The early childhood years are seen to be significant ones in the development of the self concept and the influence of healthy or unhealthy parent-child relationships on the child's attitude towards himself, is seen to be central. Individuation of the child from the parent is a process which also affects the development of the self concept; the development of language and the ability of the child to move in space helps to accelerate the child's

sense of autonomy, which helps in the development towards individuation. It is considered that positive self concept in all its dimensions will result if trust, autonomy and initiative are encouraged (Samuels, 1977).

iii) Self Concept and the Disabled: The theory and its problems

The only Theory which addresses itself to self concpet in the disabled, is Somato Psychology, as expounded by Wright. The main point to be made is that in trying to describe how the concept of the self is formed, and what that concept ultimately becomes, Wright does not refer in any substantive way to the literature and ideas on self concept developed in able bodied children. In the end, one is not clear about the derivation of Wright's views. The only point of reference seems to be the psychoanalysts and their emphasis on the importance of the physical self in the development of the self concept.

The other point to be made is that Wright does, nevertheless, postulate a number of descriptive concepts regarding the self concept in the disabled, which, in themselves, do provide a framework within which to view self concept and the disabled. The only difficulty is that it is most difficult to generate specific hypotheses beyond the general one that the self concept of the disabled is not necessarily significantly different to the self concept of able-bodied individuals. It might also be noted that Wright's theory is not based on any empirical research.

The Theory Itself

In discussing the development of the self concept, which Wright believes to be important in the overall development of the individual, Wright refers to the process of differentiation and integration. Differentiation occurs in the young infant who, at first, does not make any distinction between that which is himself and that which is not. However, over time, differentiation between self and outside world takes place. It is during this process that the sense of

self or "I" emerges. Wright refers to Fenichel (1945) who, in the psychoanalytic tradition, placed special importance on the physical self, both in the differentiation of the growing child from the external world and in the continuing development of the ego.

Learning about self occurs through various modalities. The growing individual develops views about himself as a result of his sensory experience, the views of others, as well as the inferences based on these sources of information.

During this process of learning about self, the body may become invested with significance beyond its concretely appraised functions. Body parts assume such connotations as good and bad, adequate and inadequate, and so on. In this way, the development of the self concept in the disabled child may be affected by the presence of a physical handicap.

The other process referred to earlier is that of integration. New information about self is integrated through modification of old information or of the new information, and sometimes of both. Different aspects of self may or may not be interdependent and so integration of new information may or may not require ordering into a total image of the body but rather a sub part may be sufficient. An example of this is someone who considers himself handsome but is cruel to others. His appearance self and moral-behaviour self are relatively independent, i.e. a change in either of these sub parts of the self has little effect on the other. On the other hand, sub parts may show a high degree of interdependence and integration, e.g. when a person sees himself as cruel to others because he hates his appearance.

Wright continues to make the point that the integrating process is often associated with self evaluation. Events, attitudes of others are perceived in the light of already existing levels of self regard, and it is because of this that self concept is difficult to change. The very thing to be changed has

considerable power in interpreting the experiences of the person so that they fit its own image and are not seen to conflict with the self concept.

In addition to describing some of the processes governing the development of the self concept, Wright also discusses the structure of the self concept from the point of view of what is referred to as two general factors, i.e. the "self connection" gradient and the "status value" gradient.

The Self Connection Gradient. The "Self Connection" gradient may be described as referring to the extent to which the disabled part of the body is seen by the disabled individual as being associated with centrally important aspects of self. More specifically:

a) attributes of self differ with respect to how central they are to what may be called the "essence of the self". For example, blood type is usually seen to be varely associated with this central core of self, while appearance is often highly associated with this central core. In addition, it appears that events involving the face and torso are more closely connected with self essence than the appendages. It is expected that adjustment to facial disfigurement would, in general, be more traumatic (if one accepts the concept of the self connection gradient) than adjustment to a leg disfigurement.

b) the connection with self core is less intense when a body attribute is looked upon as a tool rather than a personal characteristic. For example, false teeth may be thought of as tools for eating, or as symbolizing one's personal decline.

c) Certain personal characteristics of self are seen to be more crucial than others. People identify themselves, for example, as men or women, rather than as broad-headed or big-headed.

d) Sometimes the body becomes detached from that inner core. According to Wright, this is seen to be deleterious to the rehabilitative process. This is so in that the person who feels psychologically that the withered limb is not a part of himself will not be able to make most effective use of it. According to Wright, "The disability must become an integrated part of the self, not severed from it, though research will have to show whether its optimum position on the self connection gradient is at a distance from or closer to the self-core" (p. 151).

The Status Value Gradient. This factor may be described as referring to the relative importance (as seen by individuals and society) of certain characteristics. Attributes vary with respect to their relevance for the evaluation of personal worth or self esteem. In the American culture, for example, success and achievement commonly are valued more and have more status than diligence or co-operation. With respect to disability, physique also has a high status value, and Wright refers to a number of value changes (in both the disabled individual and the society) she considers have the power to reduce the status value of physique.

In Wright's view, the power of a single attribute (i.e. a disability) to influence self esteem will be greater if firstly, the closer the connection between it and the self core, and secondly, the higher the status value it possesses. She continues to conclude with the following two points:

a) Since a disability is a psychologically evaluated condition, and since physique almost always has some connection with the self core, and since physique in most cases has some status value relevancy, for most people self esteem will be threatened by disability. This is not to say, however, that disabled people tend to feel more inferior than the able bodied, because the able bodied may also feel inferior about particular attributes.

b) Although negative feelings stemming from the negatively evaluated aspects of the disability are likely to be experienced, they can be "but a tiny voice in a chorus whose main themes speak of the coping aspects of the situation". When the coping aspects are noticed, positively evaluated attributes may emerge, and establish high positions as the self connection and status value gradients, thereby building up self esteem.

iv) Self Concept and the Disabled: The studies and their problems

There are very few empirical studies dealing with self concept and the disabled. Only five could be located by the author and they suffer similar methodological problems to those described in previous sections. Different disabilities are represented, and sometimes control groups are used and sometimes not. Most importantly, apart from associating positive self concept with high acceptance of disability, it is most difficult to draw any other conclusions.

The Studies Themselves

There are only three studies which stem directly from the theory of Somato Psychology. Linkowski and Dunn (1974) examined the relationship between acceptance of disability and two aspects of self concept which were self esteem and satisfaction with social relationships. The study was based on Wright's contention that acceptance of disability is associated with a positive self concept and with the disabled individual being "well on his way toward being well adjusted" (p. 134).

Linkowski and Dunn sent self report questionnaires measuring acceptance of disability, self esteem and satisfaction with social relationships, to 76 disabled undergraduate and graduate university students. (We are not told which disabilities exist in this group of subjects.) Results indicated a significant correlation between acceptance of disability and self esteem, and a significant correlation between acceptance of disability and satisfaction with social

relationships. In addition, a significant association between self esteem and satisfaction with social relationships was also found. The authors conclude that their results suggest that perceptions of disability are a significant and central aspect of the self concept, relating to both self esteem and satisfaction with social relationships.

Another study stemming from Somato Psychology attempted to replicate these findings with a group of teenagers with oral-facial clefts. Starr and Heiserman (1977) administered the same acceptance of disability scale used in the previous study as well as a self esteem scale and a behaviour checklist to a group of 72 teenagers with oral-facial clefts. (We are not told the age of the subjects.) Two groups were established on the basis of acceptance of disability scores, from which emerged an extremely unfavourable group.

Results indicate that there was a significant difference in self esteem scores, i.e. the group with a high level of acceptance of disability also scored high on the self-esteem test. In addition, this group also scored significantly lower on four items of the behaviour checklist (which consists of concrete behaviour descriptions) that did the extremely unfavourable group. That is, those teenagers who scored highest on the acceptance of the disability scale also scored significantly lower on aggression, activity level, somatization and sleep disturbance, than did the subjects who scored lowest on the acceptance of disability scale. The authors conclude that their findings support Wright's (1960) premise that a person's acceptance of disability is likely to be associated with better adjustment.

The third study which stems from Wright's theory, is a recent one. Ostring and Niemtner (1982) compared a group of children with Cerebral Palsy (C.P.) and a physically healthy group. The theoretical basis of their study was Wright's view that the disabled individual's self concept greatly affects his adjustment to the disability and his acceptance of it as part of his self esteem. The disabled

group consisted of 30 children with C.P. aged between 9 and 13 years and the non disabled group consisted of 34 children aged between 10 and 12 years. The study aimed to describe (a) the self concept of school age children with C.P. (through the administration of instruments measuring body image, ego strength and self esteem), (b) their attitude towards their handicap (through the administration of an attitude to disability test), and (c) the relation betwen the self concept and attitude to disability, and (d) relation between attitude towards handicap and self-care on one hand, and school achievement (judged by school grades) and school achievement and school adjustment (as judged by teacher ratings), on the other. The results indicate that:

a) The C.P. group and able bodied group experienced their body image in a similar way; in all ego strength scores, the C.P. group obtained lower scores, some of which were statistically significant (we are not told the meaning of the determinants where statistically significant differences occurred). In addition, the self esteem scores in both groups were of the same level.

b) In both groups the attitude towards the handicap was positive. Four factors (in both groups) emerged from the statistical analysis. These factors were called:

   1) dimension of feeling of inferiority brought about by the handicap;
   2) dimension of positive attitude towards the handicap;
   3) dimension of failure brought about by the handicap; and
   4) dimension of dependence brought about the handicap.

c) The ego strength and body image scores were significantly positively correlated with a positive attitude to handicap. One of the factors emerging from the attitude to disability scale, "dependence brought about by the handicap" was significantly negatively correlated with self esteem.

d) A positive attitude of the C.P. children toward their handicap and good self reliance had a statistically significant correlation with good school achievement and school adjustment.

The authors, in discussing their results, point out that the two groups were, in fact, different. As well as this, they were small in size, and thus cannot be regarded as representative. They consider, however, that their results are nevertheless in accordance with Wright's theory and show that adjustment to the handicap corresponds to the adjustment to any other problem situation.

In addition to these few studies which investigate self concept and adjustment, there are a few studies which seek to compare the level of self concept in the disabled and non disabled.

Teplar, Howard and O'Connor (1981), although not using Wright's theory as a conceptual base for their study, do investigate the self concept of young children with C.P. They compared a group of 15 children with C.P. aged 4 to 8 years, with an able bodied group of children matched for age, sex, ethnicity, I.Q. and socio-economic status. They administered an already existing self concept scale for young children to their subjects, as well as asking teachers and parents to fill out a behaviour rating scale. In addition, each child and parent was interviewed separately. Results indicated that:

a) There was no significant difference between the two groups on the self concept scale although they tended to be lower for the handicapped group. However, closer inspection of data showed that the highest mean self concept score occurred in the older able-bodied boys, while the lowest mean score occurred for the older disabled boys. In addition, the mean score was lower for the older disabled boys than for the younger disabled boys. Scores from the other able-bodied boys, girls and disabled girls, did not show this trend.

b) The teachers rated the classroom behaviour of the disabled children as showing significantly lower self esteem than the behaviour of the able bodied controls. In addition, teacher ratings and self concept scores were negatively related on the disabled group. That is, if the child was handicapped and had a high self report, the teacher tended to report behaviours reflecting lower self esteem. In contrast, the higher a control child's self concept, the higher his teacher rated his self esteem behaviour.

c) The parents of both groups showed no difference in that response on the behaviour rating scale.

Once again, the authors of this study (as have those of other studies mentioned thus far) comment on the validity of their results. They point out that here only a small number of children were studied, all of whom came from "highly specific social intellectual and educational background" (p. 735). These results, say the authors, should therefore not be taken as representation of the disabled population as a whole. Nevertheless, it was apparent from the interviews with this sample of disabled children, that by the age of 4 they were already becoming aware of the fact they were different. Teplar, Howard and O'Connor conclude with the statement that their findings ". . . support the hypothesis that children with C.P. begin to regard themselves as different as early as 4 years of age. However, these self-views and their potentially negative effects on self esteem do not appear to crystallize until the children are in the primary grades at school" (p. 736).

Meighan (1970) administered the Tennessee Self Concept Scale (the scale used in this study) to a group of 203 visually handicapped adolescents. (We are not told of the degree of blindness experienced by these subjects, nor their ages in the summary of the study available to the author.) This scale is normed, and results indicated that the visually impaired subjects were significantly different from the normative group scores in almost every subscale of the

instrument. In addition, the results of this study also showed that there was no significant association between the self concept scores and academic achievement levels of the visually impaired adolescents.

v) Summary: Self Concept

1) General comment was made that both the theory and research regarding self concept in the disabled are such that it is most difficult to take direction in terms of this evaluation.

2) Despite this, the author presented a brief argument in support of the designers of the HETA programme seeing self concept as a central variable, which they wanted the programme to affect. A theory held by the designers regarding self concept and the HETA clients, was articulated: that because these youngsters had experienced failure and lack of achievement in a number of areas of their life experience, their self concept was likely to be negative. Some of the early childhood literature was briefly cited to support the view that lack of achievement negatively affects self concept in children and adolescents.

3) The definition of self concept as it appears in the psychological literature, was presented and discussed, as were ideas relating to the development of self concept in this literature.

4) The theory and empirical work on self concept and the disabled was presented, with a view to demonstrating the difficulties mentioned in the General Comments at the start of this section on Self Concept.

3.3.3 Vocational Maturity

Having discussed the first of the variables designed into the programme by the designers of HETA (i.e. self concept), let us proceed to the second variable considered important, and which the author decided to consider in the evaluation: that of vocational maturity. As in the previous section on self

concept, the author will provide some context to try and explain why, in fact, vocational maturity was seen to be important. After this, the problems of the available theory and research will be presented and discussed.

i) Why Vocational Maturity?

As with self concept, the author supported the view that the attitude of the disabled adolescents to the work situation was an important variable to be affected by the programme. In particular, the staff observed that these youngsters were quite unrealistic in their vocational expectations for themselves, as well as undecided about their vocational futures.

As before, the disability literature did not see vocational maturity as an important variable. However, the career development literature did provide some direction in this respect. It suggested that less socio-economically favoured adolescents encounter many problems as they attempt to cope with the task of career choice (Lo Cascio, 1964). Furthermore, the two major problems in choosing an occupation which arise in the course of career development during adolescent years, are indecision and unrealism. Crites (1969) conducted a study which showed approximately 30% of high school students in their senior years are undecided about what they want to do, and a similar percentage are unrealistic in their choices. That is, vocational maturity when defined as being undecided and unrealistic, is seen as being an important variable in the career development of young people.

Although the study was conducted in the U.S.A. and consisted of an able-bodied population, it makes sense to extrapolate this finding to the group for whom HETA was designed. Indeed, if vocational maturity is important when discussing able-bodied adolescents, an argument could be made that it is even more important when discussing disabled youth, who are already at a disadvantage in a highly competitive employment market, because of the additional limitations which their disability may impose.

Having discussed very briefly why the author supported the view that vocational maturity was another important variable that the HETA programme should affect, let us now proceed to the variable itself as it relates to the disabled.

ii) Vocational Maturity - Problems with the Theory

The main problem here, is that there really is no theory of career development in the disabled, let alone a theory related to the specific variable of vocational maturity in the disabled. This lack of literature may be related to a growing pessimism about the disabled's employment chances in an ever-increasing difficult economic situation. Perhaps from one perspective it is unrealistic to develop theories regarding the process of career development for the disabled, if the employment opportunities are not there. It may also be that in general, work with the disabled, be it academic or pragmatic, attracts little kudos, either in terms of financial support or professional recognition. These are the only reasons which occur to the author and which may explain the almost non-existent literature.

By way of introduction to the concept of vocational maturity, however, a brief introduction of career development theory will be presented. This will be followed by discussion of the problems related to the theoretical literature regarding vocational maturity itself. It must be pointed out at this stage that the notion of vocational maturity was articulated in the 1950's and 1960's, when the expectation of employment was not fraught with the difficulties it is in today's world. A real opportunity existed for youngsters to be fitted to their suited vocations; this often is not the case today. Nevertheless, this idea of vocational maturity is most important, and ought to be addressed by a programme like HETA, whose ultimate goal is to increase disabled youngsters chances of employment.

(1) Career Development Theory

Until the Second World War, interest in vocational development was mainly atheoretical, and focused on the idea of fitting people to work that matched personal characteristics. After World War II, however, considerable effort was invested in developing theories governing the process of vocational choice, its implementation and, to some extent, its progress through the life span.

The theories of Super (1953, 1963); Gunzberg et al. (1951); Roe (1957) and Holland (1959, 1966, 1973) have emphasized two major ideas: the systematic development of vocational life, and personality implementation through career. Gunzberg et al. (1951) conceptualized systematic development as a series of stages through adolescence into early adulthood that display increasing involvement in decision-making for the world of work. Super (1953) described a similar, although more detailed, set of developmental stages which he (in contrast to Gunzberg et al.) extended throughout the life span. Roe (1957) considered that the developmental period most significantly related to career occurs early in childhood when experiences with important others (especially the parents) determine the individual's basic interpersonal orientation and mode of satisfying needs in general, and in work in particular.

With respect to personality implementation in career development, Super introduced this in terms of self concept implementation. That is, the notion was that all individuals try to display and satisfy their self view in the work they choose to do and the manner in which they approach it. For Holland (1959, 1966, 1973) personality implementation through work is the attempt of individuals to enter a work environment that is congruent with their personal orientation to the world. Holland identified 6 personality types and considered that individuals, whose personalities are characterized by some idiosyncratic combination of these 6 personality types and are dominated by one or two of the types, try to find work environments which are populated by people and events like their own dominant traits.

These four theories have stimulated a considerable amount of research, which support

> "at least in broad outline . . . Super's and Holland's theories, and the stages of Gunzberg's approach seem generally valid. Only Roe's theory has had little support, and even for her work, some recent data (see Osipow, 1973, p. 30) and revisions in the theory (Roe & Klos, 1969) suggest that some validity may exist for her formulation." (Osipow, 1976, p. 53).

(2) The Concept Itself

The first theorist to use the term, vocational maturity, was Super (1955). Super's definition of the concept referred essentially to the individual's degree of development from the time of his early fantasy choices in childhood, to his decisions about retirement from work to old age.

Super's introduction of the idea of "vocational maturity" stimulated a number of different definitions in order to propose a model for the measurement of vocational maturity. He pointed out that the basic assumption underlying the various definitions of vocational maturity is that vocational behaviour changes in certain ways with increasing age (Super et al. 1957). More specifically, vocational behaviour is purported to become more goal directed, more realistic and more dependent with age (Super & Overstreet, 1960). That is " . . . in adolescence the expectation is that an individual's vocational preferences are more specific, agree better with reality and reflect greater independence from the influence of others at the end of high school years than at the beginning" (Crites, 1961, p. 255).

The literature contains a number of different definitions of vocational maturity. Two of these conceptualize vocational maturity as being an absolute point along a scale of vocational development, i.e. a degree of vocational development. Three alternate definitions, however, conceptualize in terms of relative degree of vocational development relative to age, expected life stage and to the behaviour of others.

These definitions, together with their common assumption that vocational behaviour changes with increasing age, formed the basis of Crites (1961) refinement of the concept of vocational maturity. He proposed that vocational maturity ought to be seen in terms of (a) degree of development, and (b) rate of vocational development.

Degree of vocational development refers to the maturity of an individual's vocational behaviour as indicated by the similarity between his behaviour and tht of the oldest individual in his vocational life span. This refers to the procedure of, for example, comparing the vocational development behaviour (e.g. reality testing vocational capabilities, gathering occupational information, and so on) of someone at the beginning of his high school years, with the vocational behaviour of someone at the end of his high school years. That is, the vocational behaviour of the oldest individuals in that life stage, is the criterion against which vocational development of the individual is measured. As mentioned above, this definition assumes that vocational behaviour does change systematically over time, to become more realistic, goal directed, and so on. Degree of vocational behaviour then, invovles identifying where an individual is on the continuum of vocational development behaviours which go from less mature, to more mature.

Rate of vocational development, however, refers to the maturity of an individual's vocational behaviour in comparison with that of his own age group. That is, there are norms for vocational behaviour, and an individual's vocational behaviour is compared to these; the individual is seen to be more or less vocationally mature than his peers. In other words, the vocational behaviour of the individual's own age group is the criterion against which vocational development is measured.

As mentioned earlier, this theory of vocational maturity was defined in the 1960's, when employment was a realistic option for many young people. An argument could be made to say that in the current economic climate of

limited employment opportunities for young people, the concept of vocational maturity is an irrelevant one, to say nothing of being unrealistic. It is important, however, to point out that Crites' definition of vocational maturity was translated into a scale, which was aimed at identifying those teenagers who were, in fact, disadvantaged by being less mature vocationally than their peers. The author wishes to stress the importance of such a disadvantage for disabled youth, who are even less competitive in the employment market. In that the goals of a programme like HETA is to make them employable, attention to this variable of vocational maturity becomes all the more relevant, rather than the opposite.

(3) Vocational Development in the Disabled

The major problem here is that there is a lack of theoretical formulations regarding the career development of the disabled. Again, the author can only explain this by pointing to the overall lack of research on the disabled, which is likely to be a reflection of the overall importance which, in the past, has been placed on the needs of disabled individuals in our society.

With respect to the literature on vocational development of the disabled, the author could only find one contribution, which attempted to hypothesize on this issue. This work will be presented, in order to demonstrate the difficulties of the literature on the disabled.

Osipow (1976) in his discussion of the assumptions made about the vocational development of the disabled, continues to compare them with assumptions made about the vocational development of the able-bodied. However, his analysis is not based on empirical data, seems to consist of very many generalizations, and is such that once again, it is quite difficult to take direction or generate specific hypotheses to be further investigated. These, however, are the points he makes:

(i) There is an all or none view of disability in society, which often does not see, for example, that paralysis is different from individual to another, that blindness comes in degrees, and so on. In Osipow's view "identification of the nature of the disability and its effects on physical and social events is very crucial to understanding the vocational development of the disabled" (p. 55).

(ii) There is also a tendency to see all disability and disabled persons as being the same. However, onset of disability may affect the individual, and ought to be taken into account in that it may have subtle effects on the disabled individual's vocational development.

(iii) Sometimes it is thought by society that disabled people do not have a subjective psychological life; such blotting out helps the able-bodied avoid thinking about the problems of the disabled. One effect of this is the tendency to stereotype kinds of work that disabled people can do without regard to their individual differences and potentials.

(iv) This is associated with another assumption that disabled people are really quite limited in the work they can do and should therefore be satisfied with whatever work they can obtain.

(v) A further assumption is that development stops after a person becomes disabled, with no recognition of the changing psychological and social needs of disabled individuals as they grow older.

In comparing assumptions which underlie views about the disabled, with assumptions about the able-bodied, Osipow produces the following table:

Assumptions about Career Development under Ideal Conditions Compared with Under Disabled Conditions

Assumptions about Career Development in the Able bodied	Assumptions about Career Development in the Disabled
1. Career development is systematic.	1. Career development is unsystematic and influenced by change (i.e. the disabled better take what they can get).
2. Career development is psychologically influenced.	2. Career development is not psychological since the disabled don't have much subjective psychological life.
3. Career development is culturally based.	3. Career development is not important for the disabled.
4. The total person is involved in career development.	4. The disability itself overrides other characteristics in determining career behaviour.
5. People are multipotential regarding careers.	5. The career options of the disabled are very limited.
6. Career behaviour is developmental.	6. The career development of the disabled (and the general development as well) is arrested or retarded.
7. Career development is stressful at choice points.	7. The career development of the disabled is stressful at all points.

As can be seen, the summary presented above of Osipow's discussion regarding assumptions made about vocational development of the disabled, indicates that Osipow's "theorizing" is not very convincing. In addition to the lack of empirical data (which is hardly his fault) there is also a lack of conceptual clarity. On what information does he draw his assumptions? Are they his observations of society, or are they other people's views? This is altogether unclear, and while his comments make intuitive sense, it is difficult to draw clear directions from them.

The only "assumption" from his table which bears directly on vocational maturity per se, is the sixth assumption: "The career development of the disabled (and the general development as well) is arrested or retarded." Once again, it

is a comment on how Osipow perceived vocational development to be seen. No data or statements are produced to demonstrate to what extent the assumption is a reality.

Having demonstrated the kinds of problems with respect to the little theorizing found regarding vocational maturity, the author will now show this with respect to the empirical data on vocational maturity in the disabled. Once again, the problems are similar to those mentioned before: very few studies exist, and those that do employ subjects with different disabilities. As before, it is difficult to confidently take direction from the 3 studies which could be found, although one study did use the same instrument as the present author used for the HETA evaluation.

iii) Vocational Maturity - Problems with the Research

Siefert (1980) tried to answer these questions: (a) in which way and in regard to which aspects or dimensions of vocational maturity do there exist systematic differences between physically disabled and non-disabled students; (b) are there any systematic variations in the development of vocational maturity across grade 7 through 9 between these 2 groups; (c) to what extent do the development and level of vocational maturity depend on the influence of other variables, especially intelligence, age, sex and socio-economic status of the family.

Siefert's experimental group consisted of 125 physically disabled students in grades 7 to 9, with a mean age of 14 years 10 months. (We are not told the age range nor the kinds of disabilities present in this group of children.) This group was compared with 421 non-disabled children in the same grades; these children had a mean age of 14 years 2 months. The children were administered two vocational development questionnaires (one of which measures vocational maturity and is the same one used in the present study), an I.Q. test and a self-constructed questionnaire. (We are not told what this questionnaire measures.)

Results of the study were as follows:

1) As a group, the non-disabled students scored consistently higher than the disabled students on all dimensions of both vocational development instruments. Statistically significant differences occurred on two dimensions of one of the instruments (extent of planning and world of work information) and in the overall score of the other instrument (vocational maturity).

2) Although the able-bodied scored consistently higher on the vocational maturity scale, statistically significant differences occurred only for the grade 7 and 9 children.

3) The non-disabled students' score on both scales increased as they got older, while the disabled group's score increased from grade 7 to 8, but not from grade 8 to 9. In fact, on almost all dimensions of one test and on the vocational maturity scale, the disabled 9th graders' scores were lower than the disabled 7th grader scores.

4) The degree of consistency between the first vocational preference and the second vocational preference was significantly lower for the disabled students than for the non-disabled. This may be due to the disabled young people having greater difficulties in developing alternative vocational preferences and that they may be fixed on one single (and often unrealistic) preference.

5) The dependence of the vocational maturity level on other variables was generally low. Age and socio-economic status of parents correlated significantly with only two dimensions of one of the scales. Intelligence correlated significantly with all dimensions except one of one of the scales.

Another study (Goldberg, Bernstein & Crosby, 1975) investigated adolescents with burn injury and the relationship among facial disfigurement, career plans and rehabilitation outlook of 34 of these young people. The subjects were aged 12 to 18 years, and suffered burns ranging from a mild classification to a very

severe classification. (There were four classifications in all.) No comparison group was used, and the subjects were interviewed and administered scales. This consisted of a semi-structured questionnaire designed to elicit responses to the child's educational plans, vocational plans, acceptance of responsibility and rehabilitation outlook. This interview form and procedure was adapted for children from the Goldberg Scale of Vocational Development, which has been used with severely disabled adults.

Scores on the three variables of facial disfigurement, rehabilitation outlook and career plans were intercorrelated (the last two variables coming from the Goldberg Scale). Results indicated that:

1) Facial disfigurement correlated negatively at a significant level with both rehabilitation outlook and career plans after burn injury. Children with greater degrees of disfigurement had vague plans about the future and were devastated by the effects of their injury. Children who showed greater optimism about the future had less concern about the effect of their scars upon their vocational plans.
2) Children with severe facial disfigurement had less mature career plans in that severity of disfigurement correlated negatively with rehabilitation outlook and career plans.
3) Age was not significantly correlated with career plans and grade correlated significantly only with responsibility of vocational plans (one dimension of the vocational development scale).

Goldberg, Bernstein and Crosby (1975) consider that their study "concluded that adolescents with visible facial disfigurement as a result of burns may be profoundly affected in their rehabilitation outlook by two factors; the degree of facial disfigurement and career plans" (p. 145).

Once again, this study did not stem from any particular theory on vocational development, but rather from a view found in the adjustment literature which

says that people with visible disfigurement may experience greater discrimination and social stigma than do those with invisible disabilities (Safilios - Rothschild, 1970). While this study may not reveal much about the process of vocational development, it does comment on one variable which may affect vocational development in the disabled, i.e. the visibility of the handicap. The authors, however, did not address the possibility of the experience of the trauma (i.e. of being burned) being a significant variable. In other words, are those people who have a visible disability as a result of a trauma during a physically normal life, going to be affected vocationally in a different way to those who are born with a visible disability, and have not had a physically normal life at any stage?

The third study to be mentioned is again not specifically related to the present study, but does investigate disabled children and vocational development. Goldberg and Johnson (1978) compared six groups of children: a normal group, a juvenile delinquent group, a physically handicapped group (we are not told which disabilitied were involved), a congenital heart problems group, a facially burned group and a cystic fibrosis group. The total number of children aged 6 to 12 years was 626. All groups were interviewed using the same format as the previous experiment, the Goldberg Scale of Vocational Development.

The major hypothesis of this study was that the "handicapped" children (this included the juvenile delinquent group) would test significantly lower than the normal children on all measures of vocational development. This hypothesis was confirmed, and results indicate (among other things) that the physically handicapped group scored lower than their able-bodied grade and age counterparts on each of these dimensions of the vocational development scale used: Specificity of vocational plans; specificity of educational plans; realism of vocational plans; degree of initiative in vocational plan making; work value; strength of commitment to vocational choice; degree of awareness of occupational requirements.

iv) Summary: Vocational Maturity

a) The sparse and limited theoretical and empirical literature regarding vocational maturity was presented and discussed in order to demonstrate the difficulty of taking clear direction in terms of the HETA evaluation.

b) Despite these difficulties, the author argued in favour of the HETA programme identifying vocational maturity as an important variable to be affected by the programme, given that there is some evidence to show that vocational maturity (when defined as being unrealistic and undecided about career options) is seen to be an important variable in the career development of able-bodied youth. While it is true that this assertion was made in the 1960's, when gaining employment was less of an economic problem than it is now, the author's view is that because disabled youngsters are at a disadvantage in a highly competitive market already, the level of their vocational maturity, if low, may disadvantage them even more. Therefore, attempting to affect it through a programme like HETA is all the more important, given the ultimate aim is to increase their employability.

c) Three studies were reviewed, none of which stem from any explicit theoretical position. Two of the studies purport to show that disabled adolescents score significantly lower on vocational development tests than their able-bodied peers. The third purports to demonstrate that adolescents with visible facial disfigurements are profoundly affected by their disability in their vocational development.

d) While these conclusions seem reasonable intuitively, it is most difficult to hypothesize confidently that vocational development of the disabled adolescent is impaired in some way on the basis of results from only 3 studies.

3.3.4 Independence Skills

As with self concept and vocational maturity, independence skills was the third variable seen as being important. As before, the author will present some context for this view, and this will be followed by presentation of the almost non-existent literature with respect to this variable.

i) Why Independence Skills?

The aim of making the youngsters in the HETA programme more employable can be best seen in an overall context of increasing their general life independence skills. For example, affecting self concept, vocational maturity, level of vocational skill would in itself not be sufficient, if the disabled young person was, for example, unable to organize transport for himself/herself to get to work, unable to read signs in the workplace, unable to arrive on time, and so on. These life independence skills were seen to be very important pragmatic skills that could profoundly affect the youngster's employability. The clients were, in fact, individuals who had the physical and intellectual capacity to develop these kinds of skills.

Independence skills can be seen to be pragmatically important for the HETA programme to affect. Needless to say, there is no real support for this in the almost invisible literature on this topic. The inclusion of this variable by the author in the evaluation stemmed essentially from clinical experience with, and observation of, the practical difficulties encountered by the disabled adolescent.

There seems to be no literature which addresses the variable of independence in any direct way. With respect to the factors which might affect the success of an independence training programme, the importance of societal attitudes, the medical profession and, in particular, the family, must be taken into account. The family is important in that parents of able-bodied children often find it difficult to steer a course between being protective and allowing their children

to develop independence. This must be all the more difficult and important in the case of the family with a disabled child. Both Battle (1974) and Barker and Wright (1955) also consider the importance of the parents in the disabled child's development of independence. They also suggest that more often than not, parents of disabled children tend to be over-protective.

ii) Summary: Independence Skills

Independence Skills can be seen as an important variable to be affected by the HETA programme, a view based on clinical experience with the disabled, and the particular understanding that the youngsters for whom the HETA programme was designed were not competent in a number of basic skills (like arriving on time, organizing transport to get to work) which were essential in making them employable. That is, a good self concept and a mature attitude to work was redundant if, for example, the person was unable to organize themselves to get to the work situation in the first place, or having got there, was unable to read essential signs.

3.4 SUMMARY : CHAPTER 3

a) Problems of theory and research in the psychological literature on the disabled were discussed.

b) The major literature on the psychology of the disabled was consulted, with a view to identifying the relevance of the variables of self concept, vocational maturity and independence skills.

c) Overall, little direction could be found in this literature regarding self concept, vocational maturity and independence skills.

CHAPTER 4

PSYCHOLOGICAL LITERATURE ON GROUP THERAPY

Having shown the difficulties encountered with both theory and research as they relate to the psychological literature on disability, the author will now proceed to discuss these problems in the literature on group therapy. As mentioned before, the HETA programme was designed as a group programme. That is, participants attended group sessions every day which sought to affect these disabled teenagers' self concept, vocational maturity and independence skills. The reason for making HETA a group programme was that the staff who were available to participate in the programme were particularly skilled in group work, as was the director of the programme (who was also one of the designers).

The problem of having little guidance from the literature in choosing measures of effect did not occur when the author designed the evaluation to analyse the group processes, and how they affected these three variables which the designers identified as being so important. In fact, the psychological literature on therapeutic work and conditions necessary for change to occur in group sessions was extremely helpful. The author was able to take clear direction regarding which leader and participant behaviours should be included in the design of a rating scheme which was aimed at identifying relationships between leader and participant behaviour.

This chapter, then, will consist of discussion regarding the problems of theory and research in this literature, and will be followed by presentation of both the theoretical and empirical work. It will hopefully become clear to the reader that the author's task in designing this part of the evaluation was made so much easier because of the integration of the Group Therapy literature which, because of its integration, contrasts so strikingly with the literature described in Chapter 3.

4.1 THE GROUP THERAPY LITERATURE

4.1.1 General Comments

As mentioned already, the integration is quite considerable. This literature considers not only the process whereby change may be effected in groups, but also the methodological problems encountered in measuring process and outcome. There are, in the author's view, a number of reasons that the problems are minimal:

1) Experimental work on various dimensions of group and participant behaviour stems quite clearly from explicit theoretical frameworks, like that articulated by Rogers, who will be referred to below.
2) Definitions are clearly established and are fairly consistent throughout.
3) Although, as always, methodological issues influence interpretability of results, this literature is so substantive, and consistent in its definitions and theoretical framework, that trends nevertheless emerge.

Let us now proceed to presentation of the literature regarding group therapy. This chapter will also include presentation of material relating specifically to group work with the disabled which, as in Chapter 3, is quite minimal, both in quantity and quality.

4.1.2 Group Therapy: Findings and Methodology

Because research in the field of group psychotherapy is quite extensive, the following will consist of a summary of the major reviews in the field. This will be followed by a discussion of the methodological issues regarding research in group therapy.

Bednar and Lawlis (1971) reviewed the research in the field of group psychotherapy, and listed 38 studies as being classified into the following three categories which were based on the outcome criteria employed: (1) self adjustment, (2) environmental adjustment, (3) intellectual functions. With respect to these

three categories, they summarize thus: Group therapy may contribute to feelings of relief from personal discomfort, self-deprecation, and inadequacy, and may contribute to a sense of improved psychological well-being and self-acceptance. In short, group therapy contributes to increased self-adjustment. Data on environmental adjustment suggest that group therapy can contribute to improving observable behaviour patterns, at least in a hospital setting. Closer inspection of many of these outcome measures indicates they represent patients gaining control over disruptive behaviour patterns. The conclusion drawn here is that involvement in group therapy is related to improved environmental adjustment.

Only three studies reviewed by Bednar and Lawlis (1971) used outcome measures reflecting improved intellectual functioning. They suggest that these studies may essentially be grouped with the self-adjustment investigations, in that they indicate that anxiety can have a restricting effect on attention and intellectual functioning. According to Bednar and Lawlis (1971) it seems most reasonable to attribute the findings of these three studies to reducing patient anxiety and thus improving intellectual functioning.

A more recent review by Bednar and Kaul (1978), however, points to the lack of clarity in the group literature, regarding the basic concepts and propositions of group psychological treatment. The methodological shortcomings of many of the investigations in this area are discussed, as are the inadequacies of the conceptual origins of the research. "Without a sound conceptual base, even the most impeccable methods have limited value. Without rigorous methodology, the most fruitful conceptual issues cannot be approached" (Bednar & Kaul, 1978, p. 810).

While acknowledging the problems in the group therapy research in literature, Bednar and Kaul (1978) do draw some favourable preliminary conclusions, regarding the efficacy of group therapy. Their overall position

seems to be a balanced and fair one, in that they point to both the shortcomings and achievements reported in the literature.

> "Accumulated evidence indicates that group treatments have been more effective than no treatments, or than other recognized psychological treatment, at least under some circumstances. This evidence has been gathered under a variety of conditions, from a wide range of individuals, and in many different ways. Although it may not be the best question to ask, there is a large body of research that indicates that group treatments 'work'." (p. 792).

As mentioned above, an important feature of the group therapy literature is the view that so often problems of methodology confound interpretation of results. Bednar and Lawlis (1971) deal with methodological issues by considering them in the context of outcome studies, group processes and client improvement, and finally pre-therapy considerations which, because it is not relevant to this evaluation, will not be included in this discussion.

i) Outcome Studies

The question asked here by researchers is what changes can be attributed to the group therapy, rather than spurious factors extraneous to the therapy situation? Most researchers use the method of administering measure pre- and post-therapy and comparing changes with no treatment control groups. Bednar and Lawlis (1971) point out that practitioners ought to be aware of certain limitations that exist in research on outcomes. They are as follows:

1) Administration of the instrument may have an effect on outcome, in that the client may learn a new vocabulary from the instrument and possibly new ways of seeing his world. This could lead to spurious improvements in later results.
2) Judges or raters may become biased over time and experience, as they become more familiar with experimental objectives.

ii) Group Processes and Client Improvement

The main question considered here is what kinds of therapeutic conditions produce change? The most frequent method of answering this question is one that relates group process variables to outcome measures. These designs have the same kind of problems as do the pre-post studies, as well as the difficulty of measuring process variables. More specifically:

1) If tests are administered during actual treatment, outcome effects could be attributed to the psychological testing or attention effect instead of to the therapeutic treatment.
2) Group process variables are frequently observed by trained raters and judges and often already available observation techniques are used. Preformed behavioural rating systems may be invalid because the behavioural categories may be inappropriate.
3) Sometimes subjective criteria are used to measure both process variables and therapeutic outcome. Bednar and Lawlis (1971) point out that there is evidence to confirm the hypothesis that clients will perceive as most beneficial those sessions in which they participated most. This does not necessarily provide evidence of good psycho-therapeutic outcome, nor does it provide information regarding relevant process.
4) A final very important issue in studying group process variables and therapeutic outcome is preserving the independence between the two sets of measurements. That is, the measurement of group process variables cannot be allowed to contaminate or influence the measurement of patient involvement.

4.1.3 Group Work with the Disabled

As mentioned before, the little information which could be found on group work with the disabled, throws no light on relevant group process variables which

ought to be considered in this evaluation. It will, nevertheless, be briefly presented to demonstrate its limitations.

In reviewing the literature on groups and the physically handicapped, it becomes clear that little attention has been focused on the use of group procedures specifically designed to meet the needs of physically handicapped people. Most frequently, existing group counselling and therapy procedures have been adapted to physically disabled persons (Cook et al., 1974; Goldman, 1971; Hollow, 1970; McClellan, 1972).

Lasky, Dell Orto and Marinelli (1977), in proposing a particular group approach for rehabilitation clients, list the specific physically disabled populations which have experienced group therapy, and mention that groups have also been used to assist parents and their disabled children in coping with family difficulties (Heisler, 1974; Hicks & Wreder, 1973).

With respect to the literature on groups with severely disabled clients who have either a spinal cord injury, polio, amputation(s), progressive neuromuscular diseases, or cerebral palsy, reference is made to the goals of such groups (in Seligman, 1977, p. 150). They are:

1) To provide information (Miller et al., 1975; Rhodes & Dudley, 1971; Manley, 1973).
2) To provide emotional support and enhance problem-solving skills (Miller et al., 1975; Wilson, 1971; Orodei & Waite, 1974; Rhodes & Dudley, 1971; Irwin & Williams, 1973; Hollow, 1972; Linder, 1970; Redinger et al., 1971; Manley, 1973).
3) To increase staff understanding and sensitivity (Wilson, 1971; Orodei & Waite, 1974; Hollow, 1972).

The population served by group approaches are in general adult rather than adolescent and goals for severely disabled people tend to focus around

providing emotional support and enhancing problem-solving skills. Outcome studies regarding the impact of such groups are indeed few, for only two can be cited in this review. Miller at al. (1975) tested spinal-cord injured people before and after a group experience and found that significant change occurred in information learned and self concept. No mention, however, is made of a control group. Schwartz and Cahill (1971) administered the Minnesota Multiphasive Personality Inventory (MMPI) to people with myasthemia gravis before and after a group experience. Their preliminary results suggest that psychotherapeutically oriented group counselling can produce empirically verifiable changes in the direction of more positive mental health in selected myasthemia gravis patients.

While the outcome research regarding the efficacy of group work with physically handicapped people is almost non-existent, there is reference to particular strategies or methods in group work with the handicapped. For example, three different kinds of groups which may be helpful for the handicapped client are identified (in Seligman, 1972, pp. 155-157).

1) Group Education

Group education aims at developing a better basis for making judgements through examining various facets of critical issues. It is claimed that group education is an excellent method for severely disabled people and their families because they can be helped to adapt to their new life roles, as well as being given extensive information necessary to maintain physical and emotional well being.

2) Group Counselling

This method is problem-solving oriented in that the group works on individual problems of the members. Increased self-understanding occurs as a result of interaction with other members and with the leader during the sessions.

3) Audio-visual

The use of audio-visual materials may have a number of effects. It can provide information clearly, provide a common experience for group members to relate to, bring suppressed feelings to the surface about sensitive topics, and enable productive discussion to begin rapidly. This kind of approach is particularly useful when dealing with sexuality and the physically disabled.

Another group approach to be found in the literature is Structured Experiential Therapy in Rehabilitation (SET-R) (Lasky, Dell Orto & Marinelli, 1977). This particular approach is aimed at dealing specifically with the intra-personal and interpersonal stress and stigma often experienced between physically disabled and non-disabled people. It is characterized by the following:

1) The group process focuses on personalized goals and group commitment for participants to help each other attain chosen goals.
2) Group processes are not allowed to evolve in a non-directed way but rather, the group is directed by the leader, using a structured experiential format, to foster quickly the development of a cohesive unit. The group goal is one of interpersonal concern as well as an explicit investment of time and energy.
3) Group experiences are then generalized to direct life experiences to help members transfer their group learnings to other meaningful areas of their lives.

There is, in addition, one more area which is relevant to this study, that is, group vocational counselling with physically disabled people (Brondzell, 1963; Rosenberg, 1956; Wilson, 1962). Desmond and Seligman (1977) postulated that the group approach is well suited to vocational counselling with rehabilitation clients, because the clients can benefit from the input, interaction and experiences provided by their peers. They point out that within the vocational

group setting, issues such as exploration of self concept and of the world of work are often dealt with. Much of this exploration can occur in the group that focuses on personal needs as they relate to information about vocations. The vocational counselling group can also support clients in decision-making and focusing of plans with respect to work, as well as allowing group members to participate in role playing in order, for example, to prepare for interviews.

Desmond and Seligman (1977) then go on to describe various vocational group approaches which already exist and which they consider to be helpful to rehabilitation practitioners. In order words, their contribution lies in the fact that they identify specific vocational group programmes which have already been used with other populations, and recommend their use with physically handicapped clients. There is, however, no empirical or outcome research cited to support either the applicability or the success of these programmes and disabled clients.

In summary, then, the literature on groups with the disabled has shown that:

1) There is no information regarding the important group process which may be associated with client change.
2) The majority of studies focus on adults rather than adolescents or children; outcome research regarding efficacy of group treatment with this client group is almost non-existent.
3) Various strategies or methods for group work with the handicapped are discussed and there are a few writers who recommend the use of vocational counselling groups with the disabled. Again, no experimental research exists to support this recommendation.

4.1.4 Conditions Necessary for Change in Groups

Due to the lack of outcome research in the area of group work with the handicapped, it is necessary to return to the general group therapy literature in order to identify the salient variables associated with change in groups. There is no reason why the findings ought not to be applicable to disabled clients in groups. All of the participants in this HETA programme were able to communicate verbally, and thus take part in group sessions. As far as the author is aware, the group therapy literature focuses on process associated with client change, rather than content of interactions associated with change. While it makes intuitive sense that a programme like HETA would focus its content on issues specifically related to being disabled and vocationally uncompetitive, one would expect that the processes associated with change ought to be similar to those occurring in groups with able-bodied people. It is in this way that the author perceives the group therapy literature to be relevant, although no mention is usually made of the disabled.

i) General Conditions

Lieberman, Yalom and Miles (1973) investigated encounter groups in a large study, and identified four different basic leadership functions: emotional stimulation, caring, meaning-attribution, and executive function. Their results showed that overall success with respect to outcome was associated with only two of the leadership styles. These were the styles of "caring" and "meaning-attribution"; "caring" leaders were defined as those who expressed considerable warmth, acceptance and genuineness, while the "meaning-attribution" leaders were those who cognitized behaviour, that is, they provided concepts for how to understand behaviour, explaining, clarifying, interpreting, and providing frameworks for how to change.

These two leadership behaviours are similar to some of those referred to by McConnell (1974) who describes the functions necessary for a group to

develop and mature. McConnell postulates that one important function of maintaining a group is "encouraging". By this, he means "Being friendly, warm and responsive to others, accepting others and their contributions, giving others an opportunity for recognition" (p. 144). This, in fact, is quite similar to the Lieberman study's "caring" leadership style. Another behaviour identified by McConnell (1974) as being important is "clarifying", which seems similar to the "meaning-attribution" leadership style in the Lieberman study. McConnell (1974) defines "clarifying" as interpreting or reflecting ideas and suggestions, clearing up confusions, indicating alternatives and issues before the group.

There is more evidence to support the importance of these two behaviours of warmth and clarification in the group settings. Yalom et al. (1967) investigated group cohesiveness as a predictor of future therapeutic outcome. His data clearly suggest that feelings of personal involvement, a group atmosphere of warmth and unity, an experience of feelings of personal acceptance, are associated with change in patients attending such groups. With respect to clarification, McConnell (1974) cites results from even earlier studies (Stock & Thelan, 1958; Coffey et al., 1950; Benne, 1964) which suggest that a significant aspect of the leader's behaviour was seen to be his role as clarifier and persistent reminder of the realities which are affecting the group. It can be seen then that the literature identifies the two leader behaviours of warmth and clarification as being associated with change.

ii) Specific Therapist Behaviour

This leads into discussion of a large literature investigating the "core conditions" required for change. These conditions were originally postulated by Rogers (1957) and were as follows:

1) Genuineness: "the therapist should be, within the confines of this relationship, a congruent integrated person . . . " (p. 97).

2) Unconditional Positive Regard: "To the extent that the therapist finds himself experiencing a warm acceptance of each aspect of the client's experience as being part of that client, he is experiencing unconditional positive regard" (p. 98).

3) Empathy: "The therapist is experiencing an accurate empathic understanding of the client's awareness of his own experience. To sense the client's private world as if it were your own - but without ever losing the "as if" quality - this is empathy" (p. 98).

The final requirement and the most critical one, concerned the client's perception of the therapist's attitude. Rogers' contention was that these attitudes of acceptance and empathy had to be communicated to, and perceived by, the client, if any change was to occur.

As mentioned earlier, there is much research regarding these specific aspects of therapist behaviour. This research essentially grew out of both the theoretical work of Rogers (1957) and a series of early studies (Whitehorn & Betz, 1954; Betz, 1963; Whitehorn, 1964). Whitehorn and Betz (1954) investigated a group of psychiatrists who had an improvement rate of 75% in their schizophrenic patients, and compared them to another group of psychiatrists who had an improvement rate of only 27%. Results showed that the successful therapists were warm, and attempted to understand their patients in an immediate and personal way. The less successful therapists tended to be more impersonal, focusing on psychopathology and a more external kind of understanding. These results were supported by Halkides (1958) whose study showed that clients rated as most successful received significantly higher therapist offered conditions of empathy, unconditional positive regard, and genuineness.

Truax and Mitchell (1971) conduct a thorough review of the literature up to 1970, regarding these core conditions. They identify a group of studies

investigating differential levels of these core conditions. These studies essentially show that groups of patients, including juvenile delinquents, hospitalized and outpatient mental patients, all have higher improvement rates with higher levels of these core conditions (Truax, Carkhuff & Kodman, 1965; Truax & Wargo, 1967a, 1967b; Truax & Wargo, 1969; Truax et al., 1966a).

This review also points to a group of studies which compares treated groups with controls and again, the findings are seen to support the postulation that the core conditions of unconditional positive regard, empathy and genuineness, are significantly associated with change (Truax & Carkhuff, 1963; Truax, 1963; Dickenson & Truax, 1966). A further study (Truax, Wargo & Silber, 1966) involving juvenile delinquents in group counselling, showed that on all 12 measures obtained pre- and post-therapy, the delinquents showed significantly more improvement than did the controls. In addition, the delinquents receiving the high conditions spent significantly more time than did the controls out of the institution throughout a follow-up of one year.

Truax and Mitchell (1971) summarize the studies they review thus:

> "These studies taken together suggest that therapists or counsellors who are accurately genuine, are indeed effective. Also these findings seem to hold with a wide variety of therapists and counsellors, regardless of their training, or theoretic orientation and with a wide variety of clients and patients . . . Further, the evidence suggests that these findings hold in a variety of therapeutic contexts and in both individual and group psychotherapy or counselling" (Bergin & Garfield, 1971, p. 310).

However, this position is, in fact, challenged by Mitchell, Bozarth and Krauf (1977) who themselves later reviewed the available literature in this area. They conclude that in fact, there is conflicting evidence regarding the existence of any direct relationship between such interpersonal skills and outcome. They

point to a number of studies which report little or no evidence of such an association (e.g. Beutler, Johnson, Neville & Workman, 1972; Beutler et al., 1973; Bergin & Garfield, 1971; Kurtz & Grummen, 1972; Mintz, Luborsberg & Averbach, 1971; Mullen & Abeles, 1975; Sloane et al., 1975; Mitchell et al., 1973).

Mitchell, Bozarth and Krauft (1977) conclude:

> "The recent evidence although equivocal, does seem to suggest that empathy, warmth and genuineness are related in some way to client change but that their potency and generalizability are not as great as once thought" (p. 481).

There is an additional body of literature which looks not at these three conditions in general (as do the studies cited above) but at the core conditions individually. For example, Parloff, Waskow and Wolfe (1978) point out that there are 21 studies on "warmth" and 35 on "accurate empathy". Approximately two-thirds of the studies on "warmth" and a similar number of the studies on "empathy" show a significant positive association between the externally rated aspects of therapist interpersonal behaviour and therapeutic outcome, while the remaining third show mostly no association. One study actually indicates significantly negative correlations (e.g., Truax, et al., 1966) with respect to therapist warmth.

As with the studies which investigated all three core conditions, the literature is divided on the significance of specific core conditions. As always with research on groups and/or psychotherapy, methodological problems are many and quality of research often uneven. Nevertheless, while Parloff, Waskow & Wolfe (1978) point out that the results are far too variable to support the hypothesis that warmth and empathy are necessary and sufficient conditions of good outcome, they do acknowledge the following: ". . . these results lead to the conclusion that warmth and empathy are highly desirable qualities of therapist behaviour" (in Bergin & Garfield, 1978, p. 293).

In summary, then, the literature points to the importance of at least three therapist behaviours, with respect to bringing about change in a group. While there is disagreement in the literature about the significance of these behaviours, there is evidence to suggest that therapist warmth, empathy and clarification are associated with client change in groups.

iii) Participant Behaviour

While there is a full literature regarding specific aspects of therapist behaviour, there is far less information regarding important variables in participant behaviour. There are, however, a few studies which do investigate participant behaviour in the group setting.

One variable which emerges fairly readily is that of "self exploration". Rogers (1957) postulated that one of the effects of high levels of core conditions was client self-exploration. Truax and Mitchell (1971) also associated at least one of the core conditions with self-exploration: "Being empathetic we assume the role of the other person, and in that role, initiate ourselves the process of self exploration as if we were the other person himself" (in Bergin & Garfield, p. 317). Truax (1968c) showed that the therapists' differential interpersonal reinforcement of client self-exploration led to an increase in self-exploration. Carkhuff (1967) and Holder, Carkhuff and Berenson (1967) found that high therapist conditions are more important for engendering depth of self-exploration among low functioning clients, than for those patients who are themselves more facilitative.

Another variable which attracts comment in the literature (although not discussed in the context of the core conditions) is that of self-disclosure. Bednar and Kaul (1978), in their review of self-disclosure, say "The value of personal self disclosure in group processes has been subject to scathing criticism and enthusiastic praise as a factor central to successful treatment" (p. 803). There

are, in addition, a few studies which investigate participant self-disclosure. Bean and Houston (1979) found that higher levels of self-disclosure may be associated with more positive self-concept in group participants. Kahn and Rudeston (1971) and Weigel et al. (1972) report an association between self-disclosure and greater reciprocal attraction.

A third variable which is referred to in the literature is that of sensitivity towards others. This information comes from the Human Relations training literature, in that human relations training involves a small group experience of some kind; as well as this, non-patient populations participate in this kind of group. There are other distinctions between human-relations groups and therapy (Gibb, 1971) and include the focus being more on personal growth than upon remedial or corrective treatment.

Studies in this field show that this kind of group experience can make participants more sensitive to interpersonal relationships (Bass, 1962a) and can lead to them seeing other members in more interpersonal terms (Harrison, 1962). In addition, group participants show an increased sensitivity towards social factors in the interpersonal situation (Kelley & Pepitone, 1952), and, an increased sensitivity towards social factors in the work situation (Blansfield, 1962). After attending human relations training groups, Ford (1964) also reports a consistent improvement in participants' sensitivity to feelings of others.

In summary, then, there is some evidence which points to the participant variables of self-exploration, self-disclosure and sensitivity to others as being important in group therapy.

iv) Participant Perceptions

In our discussion earlier on therapist behaviours, the work of Rogers was frequently referred to. One of Rogers' (1957) major contentions was that not only ought the therapist be genuine, warm and empathetic, but that these

qualities and/or attitudes had to be perceived by the client if any change was to occur.

In their review which deals with patient perceptions of the therapist, Orlinsky and Howard (1978) point out that these perceptions include non-possessive warmth, positive regard, acceptance, positive valuing and respect. They consider that although different terms are used ". . . and fine distinctions may be drawn among these constructs, they commonly must outweight the nuance of difference". In Bergin and Garfield (1978, p. 298), they cite 13 studies which, in their view, unanimously support the contention that "the patients' perception of the therapist's manner as affirming the patient's value is positively and significantly associated with good therapeutic outcome" (Board, 1959; Barrett-Lennard, 1962; Strupp, Wallach & Wogan, 1964; Lorr, 1965; Feitel, 1968; Cain, 1973; McNally, 1973; Mitchell et al., 1973; McClanahan, 1974; Sloane et al., 1975; Bent, Putnam & Krester, 1976; Martin & Sterne, 1976a, 1976b; Saltzman et al., 1976) (Op. cit. p, 298). Further evidence is presented by citing two studies which found that patient perception of the therapist's manner as "critical-hostile" was significantly and negatively associated with therapeutic outcome (Lorr, 1965; Martin & Sterne, 1976a, 1976b).

One specific aspect of the therapist's behaviour which has been seen as central to positive therapeutic outcome is that of the therapist's empathy or empathetic understanding. Orlinsky and Howard (1978) reviewed 15 studies related to outcome and patient perceptions of therapist as empathetically understanding, 5 of which found significant associations between perceived empathetic understanding and patient improvement (Lesser, 1961; Barrett-Lennard, 1962; Lorr, 1965; Feifel, 1968; Cain, 1977). A further 5 studies which examined the early phase of treatment (mostly within the first 6 sessions) also found that patient perception of therapist empathy was a predictor of good outcome (Kurtz & Grummon, 1972; McNally, 1973; McClanahan, 1974;

Saltzman et al., 1976; Tovien, 1977). One other study, however, found that this was not so (Mitchell et al., 1973).

A final group of studies are referred to, and are studies which examined process over the course of therapy. Two studies found positive associations between patient perceptions of therapist as understanding and improvement (Sapolsky, 1965; Martin & Sterne, 1976a, 1976b) while another found only a consistent but non-significant trend in the same direction (Sloane et al., 1975). In addition, one further study reported no significant relationship between level of perceived empathy and outcome (Kalfas, 1974). However, in this study it was found that the less consistent the rating of therapist empathy, the poorer the outcome. Orlinsky and Howard (1978) conclude by saying "Generally these studies support the notion that the sense of being understood by one's therapist is a fairly consistent feature of beneficial therapy as experienced by patients" (p. 299).

In addition to the specific variable of empathy, the literature refers, if only fleetingly, to a few other aspects of the patient's perception of the therapist and association with good outcome. These characteristics as perceived by the patient are "helpful" (Tovien, 1977), "competent and committed to help" (Saltzman et al., 1976), "interested" (Strupp, Wallach & Wogan, 1964), and "active and involved" (Bent et al., 1976).

Orlinsky and Howard (1978), in examining the relation of process to outcome in psychotherapy, make a brief comment on findings related to patient self-perception. They report a study by Saltzman et al. (1976) where clients who perceived themselves as expressing their thoughts and feelings with greater "open-ness" early in treatment had significantly better outcomes than clients who perceived themselves as less open in talking with their therapist. In addition, it was found that the clients' sense of "movement" or learning was also related to client improvement. Tovien (1972) found in his study that clients "experienced benefit" was predictive of improvement.

UNIVERSITY OF ADELAIDE LIBRARY

In summary, then, the literature points to a number of client perceptions of the therapist as being significantly associated with positive therapeutic outcomes. These perceptions of the therapist are that s/he is generally affirming and valuing of the client and specifically, that s/he is empathetically understanding. A few studies have also shown that client perceptions of the therapist as "helpful", "committed to help", "interested" and "active and involved" are associated with positive outcomes. With respect to client self-perceptions, it is suggested that clients who see themselves as being open and learning, are likely to have positive outcomes.

4.2 SUMMARY : PSYCHOLOGICAL LITERATURE AND GROUP THERAPY

a) This literature, in contrast to that discussed in Chapter 3, has comparatively few problems of theory and research, due to its size, consistency of definition and tendency for integration of theoretical frameworks and empirical data.

b) It was consulted because the very small literature on group work with the disabled provided no directions with respect to the design of the evaluation.

c) Although the general group therapy literature did not refer to disabled clients, the author felt its findings were applicable to the design of the HETA evaluation. This was so because this literature focuses, not on what is discussed in groups that may be associated with change, but rather, how it is discussed, so that group leaders may generate change in their clients. That is, while the issues for discussion may vary from group to group, from able-bodied to disabled clients, the aspect of the group process which is associated with client change is the way in which the leader and participants interact. That is, certain leader and participant behaviours emerge as being associated with change in groups with different populations and dealing with different problems.

d) These variables associated with client change are as follows, and have been incorporated into the design of the evaluation (as it reflected these variables being facilitated by the group process):

1) The characteristics of the therapist associated with client change in groups, are that the leader be warm, empathetic and clarify client comments.
2) Participant behaviours seen to be associated with change in groups, are self-exploration, self-disclosure and sensitivity to others.
3) Participant perceptions of the leader as interested, helpful and understanding, and perceptions of self as talking about self and learning, are also seen to be associated with positive outcomes.

CHAPTER 5

METHOD

This study adopted two major modes of investigating the hypotheses postulated in the previous section. These modes were Test Measurements and Content Analysis. Before proceeding to these however, some general comments will be made regarding design and these will be followed by a description of the setting.

5.1 DESIGN

The design of this study was ultimately a quasi experimental one, in that randomization was not possible. This was so primarily because of the numbers of subjects in the HETA programme. While the original group consisted of 8 adolescents, some of the data analysis ultimately included results from only 6 subjects (one subject left half way through the program; one subject's results were excluded because they were so different to the others and it was feared that they may seriously bias any inferential statistics computed in the data).

As mentioned in Chapter 2, Cook and Campbell (1979) in reviewing the merits of research in field settings, discuss the problems of quasi experimental non-equivalent group designs. When randomization is not possible the non-equivalent group design can yield interpretable results, a number of things being equal. It was recognized, however, that finding an appropriate comparison group for the HETA group would be most difficult.

Having recognised this difficulty, the original intention was to conduct a time sequence analysis of the experimental group. That is, it was intended that the HETA group act as its own control, with the test battery being administered at particular intervals during the life of the program. This, however, was not to be; once again the low number of subjects prevented the use of a design which may have overcome some of the problems inherent in a non-equivalent group design.

It was then decided finally to resort to a non-equivalent group design, bearing in mind the potential difficulties for interpretation of results. More specifically, it was decided to use the Untreated Control Group Design with Pre-test and Post-test measures, in that "This is a frequently used design, is often interpretable and can be recommended in situations where nothing better is available" (Cook & Campbell, 1979, p. 249).

A more recent development in research design thinking has been the view that the case study framework is an entirely appropriate and valid approach for research in the field. The context and overall approach of this evaluation falls quite easily into the case study framework (refer to Chapter 2).

5.2 THE SETTING

Once again, before proceeding to details of subjects, instruments and procedures, some comment on the style of the research is indicated. The length of the program was four months; staff consisted of a director (a social worker), three group leaders, one occupational therapist on a part-time basis, and one secretary. All five professional staff conducted group sessions with HETA participants which lasted for 1½ hours. The program ran from 9 a.m. to 5 p.m. Monday to Friday, with breaks each day for tea and lunch. The location of the program was in one section of Regency Park Centre; HETA occupied an open space about the size of two classrooms. The participants and staff decorated the area with posters, bulletin board, comfortable furniture, and so on. The atmosphere of the room was relaxed and colourful.

The experimenter was a psychologist who worked on site at Regency Park Centre. Although the experimenter knew most of the HETA participants, she had not had professional contact with them before their entry into HETA. The experimenter administered all the tests, as well as rating the sessions for the Content Analysis. The secretary of the program rated 3 sessions so that the

experimenter could check inter-rater reliability of the rating scheme used in the Content Analysis. Apart from administration of tests, the experimenter did not participate in the day to day running of the program, but attended staff meetings regularly to keep HETA staff informed of progress regarding the evaluation.

In order to find subjects for the comparison group, the experimenter liaised with Bedford Industries, which is a sheltered workshop setting for handicapped people. The experimenter negotiated with management to identify people at Bedford who might be appropriate control subjects. Having gained the cooperation of both management and the individuals who were willing to participate in the study, the experimenter visited Bedford to administer the tests.

Due to time restraints (the experimenter was able to spend only 2 days or so each week on the study because of commitments to her Regency Park Centre caseload) the Occupational Therapist agreed, upon request, to administer one of the tests to both the HETA group and the Bedford comparison group. (This was a test rating independence skills and so it was appropriate for the occupational therapist to administer it.) However, in the end, the occupational therapist was able to administer this particular test only to the HETA group.

In order to find subjects for the able-bodied comparison group, the experimenter approached a local High School. The Headmaster, staff and particular students were willing to cooperate, and as with the Bedford group, the experimenter visited the school to administer the tests on site.

5.3 TEST MEASUREMENTS

5.3.1 Procedure and Purpose

A test battery consisting of 3 tests was administered to the experimental and control groups, before and 4 months after the start of the probram. The purpose of this was to identify what changes (as measured by the instrument)

had occurred in the experimental group that could be attributed to the program.

In addition, the same battery was administered once to a group of able-bodied adolescents, in order to identify any measurable differences between disabled and able-bodied teenagers.

5.3.2 Subjects

(1) Experimental Group

This consisted initially of 8 physically disabled adolescents aged between 15 and 18 years. Intellectual functioning was generally at about the Borderline to Average level (IQ = 80-100). The physical disabilities of these youngsters were Spina Bifida (N = 2), Cerebral Palsy (N = 4), Juvenile Rhumetoid Arthritis (N = 2). [For a description of these disabilities refer to Appendix A.] Each one of these disabilities is visible and occurred at or soon after birth. These young people's education had taken place in a segregated special school; reading skills were in the main approximately 2-3 years below chronological age level.

(2) Comparison Group

This consisted of 10 physically handicapped young adults who were approximately 18-24 years old, intellectually at the Borderline to Average level, and with the same range of disabilities as the experimental group. The control group, however, was drawn from a sheltered workshop environment and all had work experience of at least one year.

(3) Comparison able-bodied Group

This consisted of 12 non-handicapped adolescents who were about 17 years of age. They were attending a local High School and streamed in a vocationally oriented class. Intellectually they functioned at the Borderline to Average level.

5.3.3 Instruments

(1) Self Concept

The test used to measure self concept was the Tennessee Self Concept Scale (Fitts, 1964). It consists of 100 self descriptive statements, and is suitable for subjects who have a reading age of approximately 11 years. The scale is available in two forms, a Counselling Form and a Clinical and Research Form. In that the population in this study was a disabled one, the Counselling Form was used. The Clinical and Research Form uses psychopathological categories in interpretation and is more complex in its scoring and analysis. Both forms make use of the same items; the Counselling Form consists of the following subscales:

Total Score: overall level of self esteem.

Identity: "What I am" items; here the individuals are describing their basic identity - what they are as they see themselves.

Self Satisfaction: level of self acceptance.

Behaviour: "This is what I do, this is the way I act"; this score measures the individuals' perception of their own behaviour.

Physical Self: here the individuals are presenting their view of their body, their state of health, their physical appearance.

Moral-Ethical Self: this score describes the self from a more ethical frame of reference.

Personal Self: this score reflects the individuals' sense of personal worth, their feeling of adequacy as a person.

Family Self: this score reflects the individual's feelings of adequacy, worth and value as a family member.

Social Self: this is another "self as perceived in relation to others"; it reflects the person's sense of adequacy and worth in their social interactions with other people.

Variability Score: this provides a simple measure of the amount of variability or inconsistency from one area of self perception to another.

Self Criticism: capacity for self-criticism; low scores suggest defensiveness, and suggest that the other scores are probably artificially elevated by this defensiveness.

Norms: The standardization groups from which the norms were developed was a sample of 626 people. The sample included "people from various parts of the U.S.A. and age ranges from 12 to 68. There were approximately equal numbers of both sexes, both Negro and white subjects, representatives of all social, economic and intellectual levels and educational levels from 6th grade through the Ph.D. degree" (Fitts, 1965, p. 13).

Reliability: No data bearing on internal consistency are reported. Test-retest reliability of the Total Positive score over two weeks was .92, with test-retest reliability of various subscores ranging between .70 to .90.

Validity: With respect to validity, Fitts (1965) reports correlations with a number of other personality tests, among them the MMPI, the Taylor Manifest Anxiety Scale, and the Edwards Personal Preference Schedules. In addition, other correlations are reported with major self-esteem inventories, e.g. Izard's Self Rating Positive Affect Scale. The Tennessee Self Concept Scale has also been found to relate to clinical indices of psychological "health"; relations between many behaviours and self esteem scores being discussed in Fitts monographs (1969, 1970, 1971, 1972).

Reviews: Reviewers of the test seem to come to two basic conclusions about the test:

(a) "the Tennessee Self Concept Scale ranks among the better measures combining group discrimination with self concept formation" (M. Suiner, in Buros, 1978, p. 586).

(b) the manual, as well as the scale that is described, suffer from two possibly fatal interrelated defects. The first defect reflects the virtually complete absence of information regarding the internal structure of the scale, the second, the high degree of over-interpretation relative to the data base that is made regarding various aspects of data involving the scale (P. Bentler, in Buros, 1978, p. 583).

Rationale for Use in this Study. The Tennessee Self Concept Scale, despite the problems mentioned by the latter reviewer, has generated a great deal of research and is widely used in clinical practice. One practical problem encountered when searching for appropriate test measures was that of the low reading age of the group being studied. The TSCS was suitable from this perspective; in addition the subscales of the Counselling Form identify aspects of self concept which are particularly relevant to this study, e.g. Social Self, Physical Self, and Self Acceptance.

(2) Vocational Maturity

The test used to measure vocational maturity was the Career Maturity Inventory (Crites, 1973). It consists of a 50-item Attitude Scale, and a Competence Test containing five subtests of 20 items each. Only the Attitude Scale was used in this study in that its purpose is described as ". . . evaluating the outcomes of career education and other didactic programs and interventive experience" (Crites, 1973). The Competence Test was constructed later than the Attitude Scale, has little reliability or validity data, and was seen to be irrelevant to this study in that it purports to measure "the relevant variables in contemporary career development theory" (Crites, 1973).

Norms: The standardization sample consisted of 5 elementary schools and the entire population of junior and senior high schools in Cedar Rapids, Iowa, U.S.A. The age range represented was 11-17 years.

Reliability: Crites (1973) quotes an average figure of .74 to internal consistency estimates which ranged from .65 to .84. According to Crites, an extremely high test-retest reliability figure would be contrary to the theoretical proposition that vocational behaviour changes with time. It should instead be low enough to allow for motivational variance but high enough to establish systematic measurement of the variable being quantified. A figure of .71 is given, where subjects were tested and retested over a one year interval.

Validity: Content validity is based upon expert judges' responses to items in the Attitude Scale. Much construct validity data are reported for the Scale which in general appears to be free from response biases. In addition, it is correlated with other measures of maturity, ability and certain personality variables.

Reviews: The reviewers cited in Buros (1978) tend to be most critical of the Competence Test. The Attitude Scale, however, is treated more receptively, although reservations are expressed about its authors' "strong claims in the handbook and manual of categorical validity for various uses of the scale in guidance" (M. Katz, in Buros, 1978, p. 1563).

Rationale for Use in this Study: The choice of this particular instrument was governed by the fact that it is really the only available instrument which measures the specific aspect of vocational maturity, a variable which is central in this study. Again, despite problems identified by reviewers, the instrument is derived from a detailed theoretical rationale and has been the focus of many studies (Katz, in Buros, 1978).

(3) Independence in Community Skills

In order to measure this variable, the Adaptive Functioning Index (J. Marlett, 1977) was adopted for use. It was designed for use by both professionals and

non-professionals in rehabilitation services, for the purposes of assessment of adaptive behaviours. The index consists of 3 separate but compatible units: Social Education, Vocational, and Residential. The Social Education Test is an objective test with criteria for marking correct and incorrect responses, while the other two are behaviour check lists using a 3 point rating scale for each behaviour.

Reliability: All items in the Adaptive Functioning Index check lists meet an inter-rater reliability significant beyond the .05 level. The Social Education unit achieves the highest inter-rater reliability of the 3 units, because of its standardized format. Figures range between .75 and .99, and in the main falling in the .90's. The interval between testing was two weeks, and four different organisations with 119 subjects in all, formed the sample.

Inter-rater reliabilities for the Vocational Check List ranged from .54 to .99, while figures for the Residential Check List were lower and ranged between .04 and .96, with the majority in the .80's and .90's. The author explains the lower reliability figures by attributing subjective bias on the part of the rater and stresses the importance on staff who use this instrument to reach consensus on what is meant by, for example, "proper" dress and "appropriate" conversation.

Reviews: None available. While a strength of this instrument lies in its specificity of most behaviours, there are obviously areas which are less clear, as is shown by the lower inter-rater reliability data.

Rationale for Use in this Study: In that the variable of independence for the handicapped adolescent may be defined behaviourally, it was logical to look for an instrument which was a behaviour rating scale. The Gunzberg Progress Assessment Charts (1966) were considered but found to be inappropriate in that they were constructed for use with the mentally retarded. The AFI, however, claimed that it was "for use with adolescents and adults who are generally

characterised by a degree of inadequate intellectual function, a history of institutionalisation or social disadvantage which are preventing social independence". This suited our population very well, with the advantage that the instrument was comparatively easy to administer.

5.3.4 Content Analysis

In order to address the second major question asked by the study, namely what in the program can be associated with any change in the experimental group, an instrument was devised. The instrument consisted of an Interaction Rating Scheme and a Participant Questionnaire.

(1) Procedure and Purpose

The Interaction Rating Scheme was used to analyse the group sessions of the HETA programme. One session (of 1-1½ hours) per day was rated for a period of four months (that is, approximately 80 sessions were rated). In order to establish inter-rater reliability, 3 sessions were rated by another observer. Figures obtained for leader verbal behaviour were .92, .97, .98, and those for participant verbal behaviour were .86, .98, .99.

The purpose of this Scheme was to identify the relationship that might exist between leader verbal behaviour for leaders and participants. It was reasoned that there might be associations between participant verbal behaviours and participant perceptions. Thus the Self Evaluation Questionnaire was devised.

The Participant Questionnaire was filled out by the experimental group after each session that was audiotaped for content analysis. It was designed to examine member perception of their leader's behaviour during the session, their own contribution, and their general comments on the session.

(2) Interactive Rating Scheme

On the basis firstly, of the literature regarding significant leader and participant behaviour in groups, and secondly, of the aims of the program, the following rating scheme was devised. [For full description of the categories refer to Appendix B.]

Leader Categories: The first four categories were found to be relevant in the literature; the last two were particularly relevant to the specific aims of the program.

Warmth: praising, reinforcing group members.

Empathy: reflecting or mirroring understanding of group members.

Clarification: repeating, restating, summarising, clarifying group members comment.

Facilitation: encouraging a group member to explore himself or any aspects of self.

Social Education: giving information about societal norms and/or expectations.

Prompting: encouraging or prompting group members to participate by asking questions.

Participant Categories: Definition of these categories was governed by expected response to the leader's verbal behaviours as defined by those categories. However, both the literature and aims of the programme influenced the ultimate choice and definition of categories. The first six caterogies are identified in the literature as being relevant; the last four are associated with the aims of the programme.

Positive Comments: praising, encouraging self, specific others or group as a whole.

Negative comments: discounting, devaluing self, specific others or group as whole.

Self Disclosure: information about own needs, values, wishes (divided into prompted and unprompted self-disclosure).

Self Exploration: exploration of own thoughts, ideas, feelings.

Sensitivity to Others: questions directed to others expressing awareness of their needs, encouraging their participation.

Understanding: conveying understanding of another.

Initiation: spontaneous, unprompted comments related to topic under discussion.

Asking Questions: factual questions related to topic under discussion.

Social Education: comments about societal values and norms.

Response to Prompt: comments made in response to leader's "Prompt" related to topic under discussion.

(3) Participant Questionnaire

The Questionnaire was devised to obtain information regarding participants' perceptions of the leader, of themselves, and participants' general attitudes. It consisted of 12 questions which were answered on a 5 point scale. [Refer to Appendix C for the complete questionnaire.]

CHAPTER 6

RESULTS

This chapter consists of two sections. The first presents data relating to the individual measures and the second section presents data obtained from the content analysis.

Given the very small number of subjects (N=6) interpretation of the data regarding their generalisability must be cautious and conservative. Overall then the governing framework in presenting the results from this evaluation is guided by these two ideas:

a) despite the small numbers of subjects, it may be possible to entertain the notion of changes and effects occurring with statistically significant data. That is, only within the context of this particular study, which occurred at the particular time it did, statistically significant results may in fact hint at changes occurring.

b) because of small numbers, however, generalisability of results is not really possible. Overall, then, interpretation must be very cautious.

In addition, because one of the main tests used is Pearsons Correlation (mainly in the Content Analysis), many tables of data have been generated. For purposes of presentation, these tables are presented in their entirety in Appendix D, while only the significant results are presented in this chapter. In addition, for the Pearsons Correlation it was in general decided to use the significance figure at the .1 rather than the .05 level of probability, again because of the small number of subjects.

6.1 INDIVIDUAL MEASURES

In order to make some comment on the independence of the individual scales used in this study, Pearson Correlations were calculated on the change scores of the three individual measures used: self concept, vocational maturity and

independence skills (see Table A, Appendix D). At the $p < .1$ level, 18 out of 84 correlations were significant. More specifically:

a) changes in vocational maturity were associated with changes in six out of the eleven self concept subscales.

b) changes in vocational maturity were associated with changes in two out of the six independence skills subtests.

c) all but one self concept subscales were associated with changes either in vocational maturity or independence skills. The one self concept subscale not associated with changes on either of the other two tests was the subscale of physical self.

In that 18 out of 84 correlations constitutes about 20% of correlations, it may well be that these scales are not particularly independent of each other. The number of significant correlations does suggest relationships between the various measures of change used in the experiment; self concept, vocational maturity and independence skills are not truly independent, and given the nature of the variables it is not particularly surprising that they are so related.

The means for the individual measures are presented in Table 1. The results will be considered for each hypothesis in turn.

Hypothesis 1: In comparison to the able bodied adolescents, the disabled adolescents will have lower (a) self concept and (b) vocational maturity.

a) Self Concept

Comparison of the means of the Self Concept scale showed that two subtests on which the difference between the HETA Pre-test scores and the Able-Bodied scores proved significant at the level adopted in this study throughout. These were the subtest Variability ($t = 2.12$, df 17, $p < .05$), which means that there was less consistency (i.e. more variability) between the subtest scores for the disabled groups than for the able bodied group; and the other subtest was the

TABLE 1. Means for Tennessee Self Concept Scale (TSCS), Career Maturity Inventory (CMI) and Adaptive Functioning Index (AFI).

TSCS	HETA pre	HETA post	Control pre	Control post	Able-bodied
Self Criticism	28.43	31.00	35.60	34.8	37.58
Total Positive	347.14	349.42	338.7	324.2	323.0
Identity	126.43	117.00	122.7	115.7	117.08
Self Satisfaction	108.57	112.28	106.9	101.6	105.66
Behaviour	111.86	107.86	109.1	107.9	100.25
Physical Self	66.00	64.14	68.7	62.0	67.33
Moral Ethical Self	70.14	69.43	67.1	64.3	62.00
Personal Self	71.57	65.28	65.3	65.4	66.00
Family Self	72.43	68.57	70.3	68.1	65.50
Social Self	67.00	66.71	67.3	64.4	62.16
Variability	60.14	43.14	52.0	56.1	46.58
CMI	25.86	34.86	25.00	26.80	32.58
AFI					
Basic Work Habits	18.43	27.28			
Work Skills	8.85	9.71	Not	Not	Not
Acceptance Skills	19.71	28.28	Administered	Administered	Administered
Personal Routines	63.85	76.42			
Community Awareness	44.00	59.14			
Social Maturity	52.57	70.00			

Total Positive subscale, the t value was 2.09, marginally lower than the .05 level of significance. That is, the HETA group at Pre-test was marginally significantly higher on overall self concept than the Able-Bodied group.

b) Vocational Maturity

As with the self concept scores, a Students t test with Independent Samples was calculated on the HETA pre scores and the Able Bodied scores. Results show that the disabled group does have a significantly lower level of vocational maturity than the able-bodied group ($t = 2.39$, df 17, $p < .05$).

Summary : Hypothesis 1

a) While there was no overall significant difference in self concept between the disabled and able-bodied groups, results do indicate that the disabled group had a less consistent self concept than the able bodied group, and a marginally more positive overall score.

b) The disabled group had a significantly lower level of vocational maturity than the able bodied group.

Hypothesis 2: As a result of the HETA programme participants will improve significantly in (a) self concept, (b) vocational maturity, (c) independence skills.

a) Self Concept

A Hotellings t squared test was calculated on the differences in self concept change scores of the HETA and control groups. Results indicate that overall there was a significant difference between the amount of change which occurred in the HETA group and in the control group ($F = 4.76$, df 11, 6, $p < .05$; see Table B in Appendix D for details). However, further inspection of the mean scores (Table 1) suggests that while HETA participants became significantly more critical of themselves and more consistent in their view of themselves than did the control group, there was almost no change in the overall self concept

in the HETA group (see total subscale score in Table 1). The control group, however, score lower on this subscale over time. It may be then, that results from the Hotellings t squared test suggest that the programme maintained the level of overall self concept in the HETA group, while the controls' self concept actually decreased over time.

In order to examine the possible structure of self concept for both the HETA and control groups, correlations were computed between the subscales of the TSCS at the pre-test and post-test (for correlations see Tables C and D in Appendix D). While care must be taken in interpreting the correlations due to the small samples with each condition, two things may be identified from the data:

a) In the HETA group, there appears to be a higher proportion of significant correlations between subtests, at the post-test then at the pre-test (14/55 pre- and 20/55 post-). In addition, 36 correlations are higher at post-test compared with the corresponding correlations at pre-test.

b) For the control group, the proportion of significant correlations at the time of pre- and post-tests is essentially constant. However, 33 correlations are higher at post-test than pre-test.

The interrelationship between the subscales of the self concept measure seems to be stronger at the post-test, as may be expected partly due to practice effects. There may be some suggestion that the change that takes place for the HETA group is slightly stronger than for the control group.

b) Vocational Maturity

A 2-way Analysis of Variance was computed to determine whether HETA participants' level of vocational maturity increased as a result of the programme compared with changes in the control group. Table 2 presents the summary of the analysis.

TABLE 2. 2-Way Analysis of Variance for CMI Scores.

Source of Variance	SS	D.F.	MS	F Value
Condition (Exp./Control)	163.78	1	163.78	8.23
Time (Pre/Post)	240.13	1	240.13	12.06
Interaction	106.73	1	106.73	5.36
Within Cells	597.07	30	19.90	

The analysis shows that there was a significant increase over the time of the programme in the career maturity of subjects ($p < .01$). In addition, there was a significant difference between the HETA group and the control group ($p < .01$) with the HETA group showing more gain in score, as indicated by the significant Group x Time interaction ($p < .01$). It may be possible therefore to attribute the gain in career maturity scores in the HETA group to the programme.

A diagram showing changes in mean values over time for both groups makes the possibly significant change clearer.

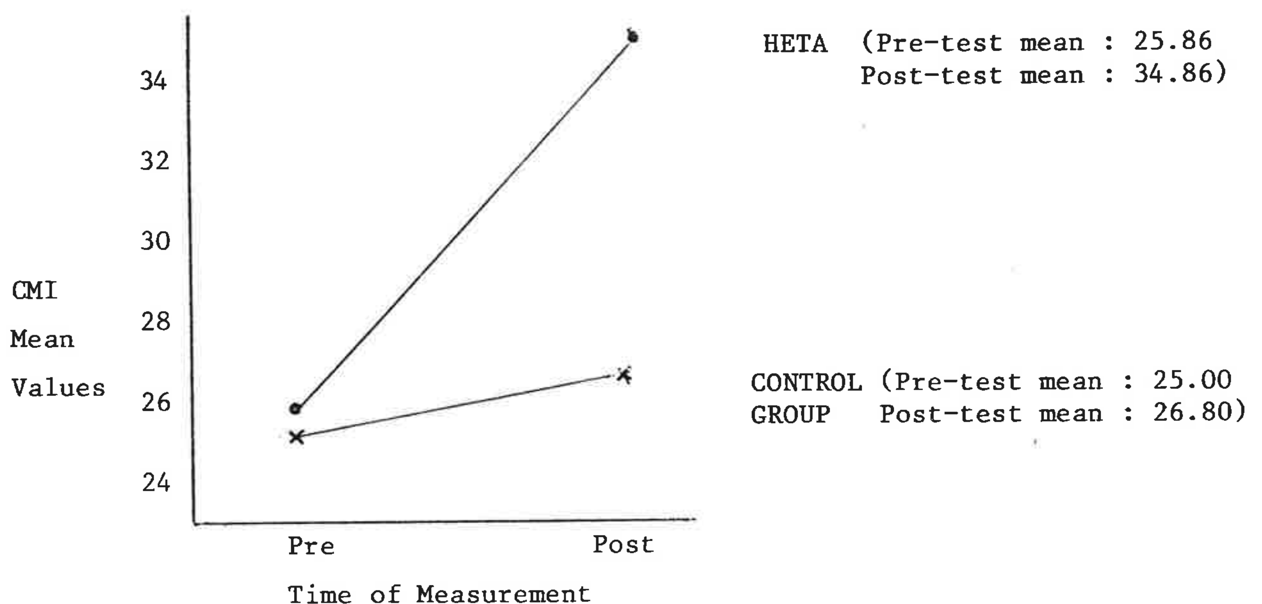

Figure 1. Changes Vocational Maturity for HETA and Control Group.

c) Independence in the Community

In that it was not possible to have the Adaptive Functioning Index (AFI) administered to the control group, a Students t Ratio for Correlated Samples was computed for the data generated by the HETA group alone.

TABLE 3. Students t for AFI Scores (HETA group only)

Subtest	D.F.	Critical t ($p < .01$)	t value
Basic Work Habits	6	-3.143	-22.1250
Work Skills	6	-3.143	4.9106
Acceptance Skills	6	-3.143	- 6.8399
Personal Routines	6	-3.143	- 9.8203
Community Awareness	6	-3.143	-10.3712
Social Maturity	6	-3.143	-15.4230

It can be seen that significant changes occurred in all areas. However, because of the lack of a comparison group with this scale, these significant changes cannot be attributed solely to the HETA programme.

Summary : Hypothesis 2

a) It is possible that the programme served to maintain the HETA groups self concept, in contrast with the control group where it may have actually decreased. In addition, HETA participants became more critical of themselves as well as more consistent in their view of themselves.

b) There was a significant improvement in level of vocational maturity in the HETA participants which may be attributed to the programme. As in any non-equivalent control group comparison, caution must be exercised in the interpretation of differences between changes in the different groups. However, given that the groups seem to be nearly equivalent (in terms of mean score) at the pre-test and the HETA group shows a quite considerable

upward shift compared with the very slight shift in the control group, suggests that the programme may have had some positive benefit.

c) While improvements in specific aspects of independence skills of HETA participants were significant, they cannot be attributed to the programme. In view of the significant alterations in the HETA group compared with the control group in the other measures however, it may be possible to make a tentative inference that at least some portion of the change in adaptive functioning was due to the programme. This inference might find some support in the fact that there are five correlations between the independence skills and self concept change scores (see Table A, Appendix D).

CHAPTER 7

RESULTS

7.1 CONTENT ANALYSIS

This chapter contains results from the Content Analysis and Participant Questionnaire used in this study. The data presented in this chapter relate directly to the second major question asked by this evaluation: what in the leader and participant behaviour was associated with participant change? This question is examined through the postulation of the following specific hypothesis:

Hypothesis 3: That the leader behaviour of warmth, empathy and clarification are significantly associated with participant changes in self concept, vocational maturity and independence skills.

Hypothesis 4: That participant self exploration, self disclosure and sensitivity to others are significantly associated with participant change in self concept, vocational maturity and independence skills.

Hypothesis 5: That participant perception of the leader as understanding, helpful and interested, and participant perception of self as learning about self, and talking about self, are associated with participant changes in self concept, vocational maturity and independence skills.

7.1.1 Hypothesis 3

That the leader behaviour of warmth, empathy and clarification are significantly associated with participant changes in self concept, vocational maturity and independence skills.

Before proceeding further, the following points are relevant. We have four variables: leader behaviour, participant behaviour, participant perception and participant change scores. A direct correlation between leader behaviour and participant change scores could not be meaningfully computed because the

direction of leader behaviours (i.e. to which participant leaders made their comments) was not recorded. This information was not obtained because the author would have had to either observe the sessions directly or have them videotaped, and neither was possible.

While a direct link between leader behaviour and change scores cannot be made, an indirect link may be suggested. This can be done by analysing the data in the following ways:

a) Correlating leader behavior with participant behaviour, and then correlating participant behaviour with participant change scores. Correlating leader behaviour with participant perception, and then correlating participant perception with participant change scores. Figure 2 below summarises this diagrammatically.

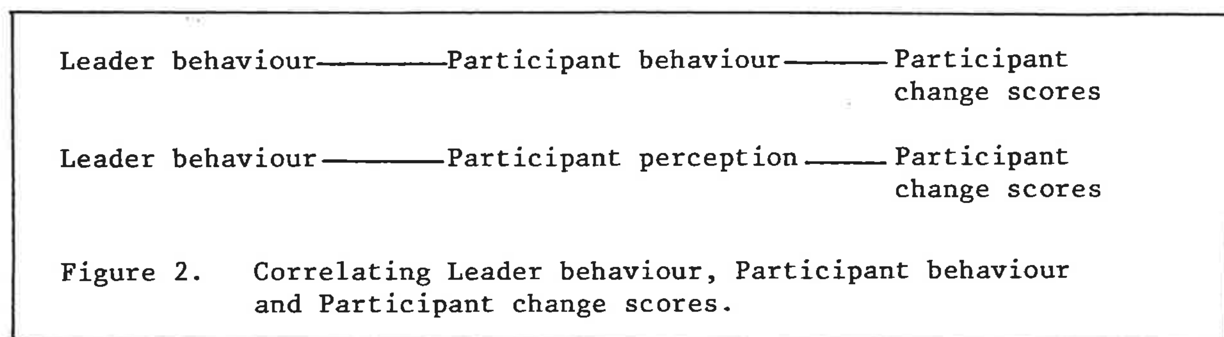

Figure 2. Correlating Leader behaviour, Participant behaviour and Participant change scores.

b) Another way of examining the data is to link all four variables through these correlations: leader behaviour with participant behaviour, participant behaviour with participant perception, participant perception with change scores. Figure 3 below summarises this diagrammatically.

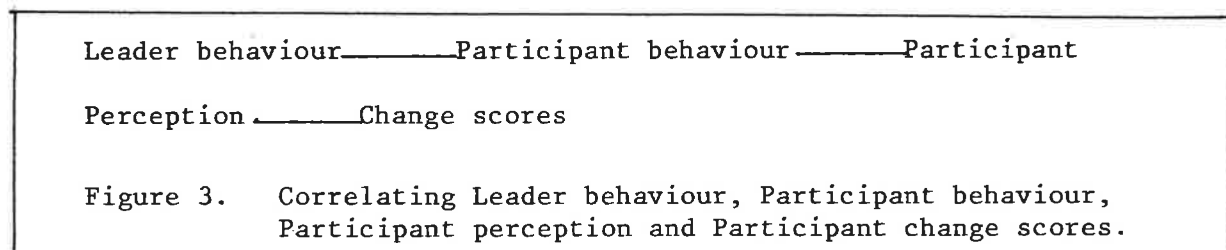

Figure 3. Correlating Leader behaviour, Participant behaviour, Participant perception and Participant change scores.

In order that the data may be presented as clearly as possible, this chapter will be divided into three sections. Section A will consist of the data regarding the correlations between leader and participant behaviour, and those between leader behaviour and participant perceptions. Section B will contain the data relating to the participant change scores which emerge from the context established by the links between leader and participant behaviour/perceptions. The links between leader behaviour and participant changes will be identified at this point. Section C will contain data relevant to the last two hypotheses postulated in this study.

SECTION A : The context defined by relationships between leader behaviour and participant behaviour/perception

3 (a) (i) Leader behaviour correlated with participant behaviour

The best way to summarise the significant scores obtained from the Pearson's Correlations computed on leader and participant behaviour is to present them diagrammatically. (In this case, pairs consisted of the number of observations made over time. Consequently N=55 and $p < .05$ was used as the level of significance. For details refer to Appendix D, Table E). Table 3(a)(i) consists of the significant correlations between leader and participant behaviour.

It can be seen from Table 3(a)(i) that the leader behaviours of warmth, empathy and clarification are all significantly associated with some aspects of participant verbal behaviour. That is, the more the leaders engage in warmth, empathy and clarification, the more participants engage in the specific behaviours listed in Table 3(a)(i).

In addition to the positive correlations listed, there were also some negative ones, particularly with respect to clarification. In these two cases, leader clarification was actually related to a decrease in participant spontaneous self disclosure and sensitivity.

TABLE 3(a)(i). Significant Correlations between Leader and Participant Behaviour

LEADER BEHAVIOUR	PARTICIPANT BEHAVIOUR	CORRELATION
Warmth	Positive comments	.31
	Negative comments	.60
	Participation	.41
	Social Education	.27
Empathy	Positive comments	.31
	Self disclosure	.30
	Self exploration	.32
Clarification	Positive comments	.49
	Negative comments	.26
	Self disclosure	.48
	Self exploration	.36
	Participation	.68
Clarification	Spontaneous self disclosure	-.27
	Sensitivity	-.26
Social Education	Positive comments	.32
	Unspontaneous self disclosure	.56
	Self exploration	.72
	Participation	.27
Prompting	Participation	.76
	Initiation	.34
Prompting	Spontaneous self disclosure	-.25
Facilitation	Positive comments	.37
	Self disclosure	.63
	Self exploration	.80

In addition to the three leader variables referred to in the literature, i.e. warmth, empathy and clarification, the three other leader variables examined in this study, were all significantly associated with some aspect of participant verbal behaviour. The leader variables of social education, prompting and facilitation were related to participant behaviour, with only one negative correlation. That was between leader prompting and participant spontaneous self disclosure.

3 (a) (ii) Participant Behaviour and Participant Change Scores

Table 3(a)(ii) summarises the significant results obtained from Pearsons Correlations computed on Participant behaviour and change scores (N=6 and $p < .1$). (For details refer to Table F, Appendix D.)

It can be seen from Table 3(a)(ii) that those participant behaviours (except one) which were associated with leader warmth, empathy and clarification, are also all associated with some changes in self concept, vocational maturity and independence skills. The participant behaviours which were correlated with leader behaviour of warmth, empathy and clarification (see Table 3(a)(i)) were: positive comments, negative comments, self exploration, unspontaneous self disclosure, participation, sensitivity to others, social education and spontaneous self disclosure.

There were two more participant behaviours which were related to participant change scores, but these behaviours were not linked to leader warmth, empathy or clarification. These participant behaviours are initiation, asking questions, and understanding.

It must also be noted that there are quite a number of negative correlations (23 out of a total of 35). In fact, each one of the significantly related participant behaviours had a negative correlation with participant change scores. That is, what subjects said was both related to improvements in some aspects of self concept and adaptive functioning skills, and to decreases in some aspects of self concept, adaptive functioning skills and vocational maturity.

TABLE 3(a)(ii). Significant Correlations between Participant Behaviour and Participant Change scores.

PARTICIPANT BEHAVIOUR	PARTICIPANT CHANGE SCORES	CORRELATION
Positive	Social Self (TSCS)	.77
	Personal Self (TSCS)	.63
	Vocational Maturity (CMI)	-.66
	Work Skills (AFI)	-.65
	Community Awareness (AFI)	-.74
Negative	Self Satisfaction (TSCS)	.81
	Social Self (TSCS)	-.72
	Acceptancy (Skills)	-.67
Self Exploration	Total Self Concept (TSCS)	.69
	Moral Ethical Self (TSCS)	-.93
	Family Self (TSCS)	-.87
	Community Awareness (AFI)	-.75
Unspontaneous Self Disclosure	Moral Ethical Self (TSCS)	-.73
	Personal Routines (AFI)	-.69
	Community Awareness (AFI)	-.75
	Social Maturity (AFI)	-.89
Participation	Physical Self (TSCS)	.77
	Personal Self (TSCS)	.65
	Social Self (TSCS)	-.88
	Vocational Maturity (CMI)	-.76
Sensitivity to Others	Personal Self (TSCS)	.76
	Work Skills (AFI)	-.77
Social Education	Work Habits (AFI)	.83
Spontaneous Self Disclosure	Work Skills (AFI)	-.70
Initiation	Personal Self (TSCS)	.76
	Social Self (TSCS)	-.72
	Community Awareness (AFI)	-.77
	Work Skills (AFI)	-.68
	Social Maturity (AFI)	-.68
Asking Questions	Self Criticism (TSCS)	.93
	Self Satisfaction (TSCS)	.77
	Total Self Concept (TSCS)	-.77
	Behaviour (TSCS)	-.83
	Social Self (TSCS)	-.69
Understands	Personal Self (TSCS)	.61
	Work Skills (AFI)	-.69

Leader Behaviours correlated with Participant Perceptions (as measured by questionnaire), Participant Perceptions correlated with Participant Change Scores.

3 (a) (iii) Leader Behaviour Correlated with Participant Perceptions

Pearson Correlations were completed on leader behaviour and participant perceptions. (Because pairs consisted of many observations over time, N=55 and $p < .05$ was used as level of significance.) (For details, see Appendix D, Table G.)

Table 3(a)(iii) below summarises the significant correlations.

TABLE 3(a)(iii). Leader Behaviour Correlated with Participant Perception

LEADER BEHAVIOUR	PARTICIPANT PERCEPTION		CORRELATION
Prompt	Leader seen to encourage self exploration	(Q7)	.25
Facilitates	Leader seen as helpful	(Q2)	.23
	Leader seen as attentive	(Q6)	.28
	Leader seen as encouraging self exploration	(Q7)	.38

It can be seen from Table 3(a)(iii) that only two leader variables, of prompting and facilitating, were positively correlated with specific participant perceptions.

3 (a) (iv) Participant Perceptions and Participant Change Scores

Pearsons Correlations were computed on participant perceptions and change scores (N=6; $p < .1$). (For details refer to Appendix D, Table H.) Table 3(a)(iv) summarises the significant correlations.

TABLE 3(a)(iv) Significant Correlations between Participant Perceptions and Change Scores

PARTICIPANT PERCEPTION	PARTICIPANT CHANGE SCORE	CORRELATION
Leader seen as helpful (Q2)	Physical Self (TSCS)	.80
	Personal Self (TSCS)	.78
	Work Skills (AFI)	-.74
Leader seen as attentive (Q6)	Total Self Concept (TSCS)	.73
	Behaviour (TSCS)	.65
	Acceptance Skills (AFI)	.77
	Personal Routines (AFI)	.63
Leader seen as encouraging self exploration (Q7)	Self Criticism (TSCS)	-.64
	Behaviour (TSCS)	.74
	Physical Self (TSCS)	.78
	Personal Self (TSCS)	.61
	Work Skills (AFI)	-.73
Leader seen as understanding (Q1)	Physical Self (TSCS)	.77
	Personal Self (TSCS)	.78
	Social Self (TSCS)	-.76
Leader seen as interested (Q3)	Self Criticism (TSCS)	-.63
	Behaviour (TSCS)	.72
	Physical Self (TSCS)	.70
	Personal Self (TSCS)	.76
	Work Skills (AFI)	-.90
Leader seen as encouraging participation (Q4)	Total Self Concept (TSCS)	.64
	Behaviour (TSCS)	.72
	Work Skills (AFI)	-.85
	Community Awareness (AFI)	-.73
	Vocational Maturity (CMI)	-.61
Leader seen as encouraging contribution (Q5)	Physical Self (TSCS)	.74
	Personal Self (TSCS)	.62
	Work Habits (AFI)	-.66
	Work Skills (AFI)	-.75
Participants see themselves as learning about self (Q8)	Behaviour (TSCS)	.65
	Physical Self (TSCS)	.83
	Personal Self (TSCS)	.76
	Work Skills (AFI)	-.84
Participants see themselves as contributing to session (Q10)	Behaviour (TSCS)	.66
	Physical Self (TSCS)	.82
	Personal Self (TSCS)	.71
	Work Skills (AFI)	-.83
Participants see themselves as talking about self (Q11)	Self Criticism	-.73
	Self Satisfaction (TSCS)	-.74
	Behaviour (TSCS)	.88
	Physical Self (TSCS)	.65
	Acceptance Skills (TSCS)	.78
Participants see session as interesting (Q9)	Self Criticism (TSCS)	-.80
	Behaviour (TSCS)	.91
	Work Skills (AFI)	-.65
	Acceptance Skills (AFI)	.68
Participants experience satisfaction with session (Q12)	Behaviour (TSCS)	.66
	Physical Self (TSCS)	.89
	Acceptance Skills (AFI)	.72

It can be seen from Table 3(a)(iv) that the participant perceptions related to leader behaviours (of prompting and facilitating) were also all related to some aspect of participant change. These participant perceptions are leader being seen as helpful (Q2), attentive (Q6) and encouraging self exploration (Q7). Other participant perceptions were also related to some aspects of participant change. In addition, the number of negative correlations were slightly fewer here than in the correlations between participant behaviour and change scores.

SECTION B : Change scores which emerge as being significantly related to leader behaviours

3(b)(i) Leader behaviours, participant behaviours and participant change scores

Table 3(b)(i) consists of the significant correlations between leader and participant behaviours and those participant behaviours and change scores.

Leader variables associated with change (via participant behaviour)

The leader variables which the literature identifies as important, that is, leader warmth, empathy and clarification, are associated via participant behaviour with a few change scores (i.e. social self, personal self, self satisfaction, total self concept, physical self, and work skills). Interpretation of these findings should be made with great caution, however, because of the small number of subjects (N=6) and also because of the number of negative correlations association indirectly with these three leader variables (see Table 3(b)(i)).

TABLE 3(b)(i). Correlations between Leader Behaviours, Participant Behaviour and Participant Change Scores

LEADER BEHAVIOUR	CORRELATION	PARTICIPANT BEHAVIOUR	CORRELATION	PARTICIPANT CHANGE SCORES
Warmth	.31	Positive comments	.77 .63 -.66 -.65 -.74	Social Self (TSCS) Personal Self (TSCS) Vocational Maturity (CMI) Work Skills (AFI) Community Awareness (AFI)
Warmth	.60	Negative comments	.81 -.72 -.67	Self Satisfaction (TSCS) Social Self (TSCS) Acceptance Skills (AFI)
Warmth	.41	Participation	.77 .65 -.88 -.76	Physical Self (TSCS) Personal Self (TSCS) Social Self (TSCS) Vocational Maturity (CMI)
Warmth	.27	Social Education	.83	Work Habits (AFI)
Empathy	.31	Positive comments	.77 .63 -.66 -.65 -.74	Social Self (TSCS) Personal Self (TSCS) Vocational Maturity (CMI) Work Skills (AFI) Community Awareness (AFI)
Empathy	.30	Self Disclosure	-.73 -.69 -.75 -.89	Moral Ethical Self (TSCS) Personal Routines (AFI) Community Awareness (AFI) Social Maturity (AFI)
Empathy	.32	Self Exploration	.69 -.93 -.87 -.75	Total Self Concept (TSCS) Moral Ethical Self (TSCS) Family Self (TSCS) Community Awareness (AFI)
Clarification	.49	Positive comments	.77 .63 -.66 -.65 -.74	Social Self (TSCS) Personal Self (TSCS) Vocational Maturity (CMI) Work Skills (AFI) Community Awareness (AFI)
Clarification	.26	Negative comments	.81 -.72 -.67	Self Satisfaction (TSCS) Social Self (TSCS) Acceptance Skills (AFI)
Clarification	.48	Self Disclosure	-.73 -.69 -.75 -.89	Moral Ethical Self (TSCS) Personal Routines (AFI) Community Awareness (AFI) Social Maturity (AFI)
Clarification	.36	Self Exploration	.69 -.93 -.87 -.75	Total Self Concept (TSCS) Moral Ethical Self (TSCS) Family Self (TSCS) Community Awareness (AFI)
Clarification	.68	Participation	.77 .66 -.88 -.76	Physical Self (TSCS) Personal Self (TSCS) Social Self (TSCS) Vocational Maturity (CMI)
Clarification	-.27	Spontaneous Self Disclosure	-.70	Work Skills (AFI)
Clarification	-.26	Sensitivity to Others	.76 -.77	Personal Self (TSCS) Work Skills (AFI)

3(b)(ii) Correlations between leader behaviour, participant perception and participant change scores

Table 3(b)(ii) below consists of the significant correlations between leader and participant perceptions, and those participant perceptions and change scores.

Leader variables associated with change (via participant perception)

While the leader variables of warmth, empathy and clarification would not be linked with participant changes via participant perceptions, two other leader variables could be. Leader prompting and facilitating were correlated indirectly with some participant changes (i.e. behaviour, personal self, total self concept, physical self, and acceptance skills). Once again interpretation should be cautious because of small numbers of subjects [see Table 3(b)(i) above].

TABLE 3(b)(ii) Correlations between Leader Behaviour and Participant Perceptions and Change Scores

LEADER BEHAVIOUR	CORRELATION	PARTICIPANT PERCEPTION	CORRELATION	PARTICIPANT CHANGE SCORES
Facilitation	.23	Leader seen as helpful (Q2)	.80 .78 -.74	Physical Self (TSCS) Personal Self (TSCS) Work Skills (AFI)
Facilitation	.28	Leader seen as attentive (Q6)	.73 .65 .77 .63	Total Self Concept (TSCS) Behaviour (TSCS) Acceptance Skills (AFI) Personal Routines (AFI)
Facilitation	.38	Leader seen as encouraging self exploration (Q7)	-.64 .74 .78 .61 -.73	Self Criticism (TSCS) Behaviour (TSCS) Physical Self (TSCS) Personal Self (TSCS) Work Skills (AFI)
Prompts	.25	Leader seen as encouraging self exploration (Q7)	-.64 .74 .78 .61 -.73	Self Criticism (TSCS) Behaviour (TSCS) Physical Self (TSCS) Personal Self (TSCS) Work Skills (AFI)

3(c)(i) Participant Behaviour and Participant Perception

Until now, the author has linked participant change and leader behaviour via participant verbal behaviour and participant perceptions:

(a) leader behaviour linked with participant behaviour linked with change scores,

(b) leader behaviour linked with participant perception linked with change scores.

Further examination of these data reveals some important differences, which suggest a further set of links that could be established. Firstly, the number of correlations overall between leader behaviour and participant behaviour, are far higher than the number of correlations between leader behaviour and participant perception (24 out of 66 compared with 4 out of 72; see Tables E and G respectively in Appendix D). It could be said then, that the link between leader behaviour and participant behaviour is possibly a more reliable one that the link between leader behaviour and participant perception.

Examining the data even further reveals that the number of correlations between participant behaviour and change scores are about the same as the number of correlations between participant perception and change scores (35 out of 198 compared with 48 out of 216; see Tables F and H respectively in Appendix D). In addition the number of negative correlations is about the same in both sets of data (23 and 15 respectively). That is, it could be said that the reliability of the link between participant behaviour and change scores might be about the same as that between participant perception and change scores. If a link could then be established between participant behaviour and perception, then the following sets of significant correlations could be brought together:

leader behaviour with participant behaviour (rather than perception), those participant behaviours with participant perceptions, those participant perceptions with change scores;

leader behaviour with participant behaviour with participant perception with participant changes.

Table 3(c)(i) then, contains the significant correlation between participant perception and behaviour. (For details, refer to Appendix D, Table I; N=55, $p < .05$).

TABLE 3(c)(i) Correlations between Participant Behaviour and Participant Perceptions

PARTICIPANT BEHAVIOUR	PARTICIPANT PERCEPTIONS	CORRELATION
Negative comments	Leader seen as interested (Q3)	-.24
	Leader seen as encouraging self exploration (Q7)	-.34
	Participants see themselves as learning about selves (Q8)	-.36
	Sessions overall seen as interesting (Q9)	-.32
	and satisfying (Q12)	-.34
Understands	Leader seen as attentive (Q6)	.25
	Participants see themselves as learning about self (Q8)	.33
	and talking about themselves (Q11)	.26
Exploration	Leader seen as encouraging self exploration (Q7)	.31
	Participants see themselves as learning about self (Q8)	.27
Unspontaneous self disclosure	Leader seen as understanding (Q1)	.24
	Leader seen as helpful (Q2)	.26
	Leader seen as encouraging self exploration (Q7)	.26
	Participants talking about themselves (Q11)	.25
Spontaneous self disclosure	Participants see themselves as learning about self (Q8)	.30
	Participants talking about themselves (Q11)	.25
Initiation	Leader seen as encouraging self exploration (Q7)	.26
	Participants see themselves as learning about self (Q8)	.33
	Participants talking about themselves (Q11)	.30
Asking Questions	Leader seen as understanding (Q1)	-.26
	Leader seen as encouraging self exploration (Q7)	-.23
	Participants satisfied with session (Q12)	-.35

3(c)(ii) Correlations between Leader Behaviour and Participant Behaviours, those Participant Behaviours and Perceptions, those Perceptions and Change Scores

In linking these three sets of correlations, it may be possible to propose how the leader variables of warmth, empathy and clarification may be connected to client change. Table 3(c)(ii) consists of these three sets of correlations and includes only those which are significant.

Summary : Hypothesis 3

This hypothesis, that the leader behaviours of warmth, empathy and clarification are significantly associated with participant change, is only partially supported.

a) Table 3(b)(i) demonstrates the nature of the link between these leader behaviours, participant behaviours and change scores. Leader warmth, empathy and clarification are significantly associated with changes in 5 out of the 11 self concept subscale scores. They are also negatively related to 4 out of these 11 self concept scores. In addition, these leader variables are associated with one out of the 6 independence skills scores, and negatively related to 3 out of these 6 scores. In addition there is a negative association with the vocational maturity score.

b) Table 3b(ii) shows that the leader behaviours of warmth, empathy and clarification are not at all related to change scores when participant perceptions are included. However, the other leader behaviours of prompting and facilitation do have some effect on client change.

TABLE 3(c)(ii) Significant Correlations between Leader Behaviour and Participant Behaviours, those Behaviours and Perceptions, those Perceptions and Change scores

LEADER BEHAVIOUR	CORR.	PARTICIPANT BEHAVIOUR	CORR.	PARTICIPANT PERCEPTION	CORR.	CHANGE SCORES
Warmth	.60	Negative comments	-.24	Leader seen as interested (Q3)	-.63	Self Criticism (TSCS)
Clarification	.26	Negative comments			.72	Behaviour (TSCS)
					.70	Physical Self (TSCS)
					.76	Personal Self (TSCS)
					-.09	Work Skills (AFI)
Warmth	.60	Negative comments	-.34	Leader seen as encouraging self exploration (Q7)	-.64	Self Criticism (TSCS)
Clarification	.26	Negative comments			.74	Behaviour(TSCS)
					.78	Physical Self (TSCS)
					.61	Personal Self (TSCS)
					-.73	Work Skills (AFI)
Warmth	.60	Negative comments	-.32	Participants learn about themselves (Q8)	.65	Behaviour (TSCS)
Clarification	.26	Negative comments			.83	Physical Self (TSCS)
					.76	Personal Self (TSCS)
					-.84	Work Skills (AFI)
Warmth	.60	Negative comments	-.32	Participants find session interesting (Q9)	-.80	Self Criticism (TSCS)
Clarification	.26	Negative comments			.91	Behaviour (TSCS)
					.64	Physical Self (TSCS)
					-.65	Work Skills (AFI)
					.68	Acceptance Skills (AFI)
Warmth	.60	Negative comments	-.34	Participants find session satisfying (Q12)	.66	Behaviour (TSCS)
Clarification	.26	Negative comments			.59	Physical Self (TSCS)
					.72	Acceptance Skills (AFI)
Empathy	.32	Self Exploration	.34	Leader seen as encouraging self exploration (Q7)	-.64	Self Criticism (TSCS)
Clarification	.36	Self Exploration	.31		.74	Behaviour (TSCS)
					.78	Physical Self (TSCS)
					.61	Personal Self (TSCS)
					.73	Work Skills (AFI)
Empathy	.32	Self Exploration	.27	Participants see themselves as learning about self (Q8)	.65	Behaviour (TSCS)
Clarification	.36	Self Exploration			.83	Physical Self (TSCS)
					.76	Personal Self (TSCS)
					-.84	Work Skills (AFI)
Empathy	.30	Self Disclosure (unspontaneous)	.24	Leader seen as understanding (Q1)	.77	Physical Self (TSCS)
Clarification	.48				.78	Personal Self (TSCS)
					-.84	Work Skills (AFI)
Empathy	.30	Self Disclosure	.26	Leader seen as helpful (Q2)	.80	Physical Self (TSCS)
Clarification	.48	Self Disclosure			.88	Personal Self (TSCS)
					-.74	Work Skills (AFI)
Empathy	.30	Self Disclosure	.26	Leader seen as encouraging self exploration (Q7)	-.64	Self Criticism (TSCS)
Clarification	.48	Self Disclosure			.74	Behaviour (TSCS)
					.78	Physical Self (TSCS)
					.61	Personal Self (TSCS)
					-.73	Work Skills (AFI)
Empathy	.30	Self Disclosure	.25	Participants talk about themselves (Q11)	-.73	Self Criticism (TSCS)
Clarification	.58				-.74	Self Satisfaction (TSCS)
					.88	Behaviour (TSCS)
					.65	Physical Self (TSCS)
					.78	Acceptance Skills (AFI)
Clarification	-.27	Self Disclosure (Spontaneous)	.30	Participants learn about themselves (Q8)	.65	Behaviour (TSCS)
					.83	Physical Self (TSCS)
					.76	Personal Self (TSCS)
					-.84	Work Skills (AFI)
Clarification	-.27	Self Disclosure	.25	Participants talk about themselves (Q11)	-.73	Self Criticism (TSCS)
					-.74	Self Satisfaction (TSCS)
					.88	Behaviour (TSCS)
					.65	Physical Self (TSCS)
					.78	Acceptance Skills (AFI)

c) Table 3(c)(ii) shows that a link may be traced when all the data are used. Leader warmth, empathy and clarification may be linked with client change associated with participant behaviour, which in turn is associated with participant perception, which in its turn is related to client change. When the data are linked in this way, the majority of the correlations are positive. The other important observation is that three most frequently related (to leader warmth, empathy and clarification) client changes are the self concept dimensions of behaviour, physical self and personal self.

The author would argue that the information summarised in Table 3(c)(ii) is the most plausible account of the possible relationships between leader behaviour and client change. This is because all of the data are taken into account, the correlations are in the main positive and one of the client change scores which most frequently emerges is related to clients perception of their physical selves. This of course seems reasonable given the client group consists of disabled adolescents.

SECTION C : Further Hypotheses

Hypothesis 4

That participant self exploration, self disclosure and sensitivity to others are significantly associated with participant change in self concept, vocational maturity and independence skills.

It can be seen in Table 3(a)(ii) (p.128) that once again, this hypothesis can only be partially supported. (The following refers only to the significant correlations.)

(1) Participant self exploration is positively associated with an improvement in overall self concept score. It is negatively associated, however, with change in moral ethical self, family self and community awareness, the latter being a subscale of the independence skills test.

(2) Self disclosure, when unspontaneous is negatively related to changes in moral ethical self, and 3 independence skills scores: personal routines, community awareness and social maturity. When spontaneous, self disclosure is also negatively associated with changes in work skills, also an independence skills score.

(3) Sensitivity to others is positively correlated with a change in personal self, and negatively correlated with changes in the independence skill score of work skills.

While the data from Table 3(a)(ii) just discussed do not provide a very optimistic picture of the relationships between these participant variables and change scores, the information found in Table 3(c)(ii) is slightly more encouraging. That is, when participant self exploration and self disclosure are linked with participant perceptions which are then in turn linked to change scores, it might be tentatively suggested that these two participant behaviours are important and related to change. (See Table 3(c)(ii), p.137)

Summary : Hypothesis 4

a) There is some evidence to partially support this hypothesis with respect to changes in self concept.

b) There is no evidence of any kind to suggest that participant self exploration, self disclosure or sensitivity to others is linked with changes in vocational maturity and independence skills. If anything there may be a negative relationship as the few correlations which do occur are in fact negative ones.

Hypothesis 5

That participant perception of the leader as understanding, helpful and interested and participant perception of self as learning about self and talking

about self, are associated with participant changes in self concept, vocational maturity and independence skills.

Table 3(a)(iv) (p. 130) shows that once again only partial support can be found for this hypothesis.

(a) The more participants perceived their leader as understanding (Q1) the greater the change in physical self and personal self, but the smaller the change in social self.

(2) The more participants perceived their leader as helpful (Q2) the greater the change in physical self and personal self, but the smaller the change in work skills.

(3) The more participants perceived their leader as interested (Q3) the greater the change in self criticism, behaviour, personal self and physical self but the smaller the change in work skills.

(4) The more participants perceived themselves as learning about self (Q8) the greater the change in behaviour, physical self and personal self, and the smaller the change in work skills.

(5) The more participants saw themselves as talking about themselves (Q11) the greater the change in behaviour, physical self and acceptance skills, but the smaller the change in self satisfaction.

(6) No aspect of participant perception was associated with change in vocational maturity.

Summary : Hypothesis 5

a) Participant perceptions of leader as understanding, helpful and interested were predominantly positively correlated with changes in self concept, but negatively correlated with changes in independence skills.

b) Participant perception of self as learning and talking about self were also positively correlated with changes in self concept, but negatively correlated with some changes in independence skills.

c) No participant perceptions were associated with changes in vocational maturity.

CHAPTER 8

DISCUSSION

This chapter will consist of a discussion of the results, and their implications. The author will begin by first summarising the results briefly and then proceed to consider the difficulties of interpretation, presenting some final conclusions. Finally, some recommendations for future research will be considered.

8.1 Summary of Results

1. There was no significant difference between the HETA group and the able bodied group in self concept. The HETA group however, was significantly less mature vocationally.

2. While the HETA group becomes more self critical and more consistent in their self concept over the course of the programme, overall level of self concept does not improve.

3. The HETA group's vocational maturity does however improve and this might be attributable to the programme. While independence skills also improve considerably, attributions about the program's role in this cannot be made.

4. Leader behaviours of warmth, empathy and clarification are associated with some changes in self concept and independence skills, but are not all associated with change in vocational maturity in the HETA group.

5. Participant behaviours of self disclosure and self exploration can be seen actually to inhibit changes in self concept and independence skills, and are not at all associated with changes in vocational maturity.

6. Participant perceptions of the leader as understanding, helpful and interested are associated with some changes in self concept. However, these participant perceptions of the leader inhibit changes in independence skills, and are not all associated with changes in vocational maturity.

Below is a presentation of the essential features of the results, in table form.

	CHANGES IN		
	Self Concept	Vocational Maturity	Independence Skills
Does change occur?	Overall no, but HETA group more self critical and more consistent.	Yes, and this may be attributed to the program.	Yes, and this may not be atrributed to the program.
Associated Leader Behaviours	Warmth, Empathy and Clarification.	No association.	Warmth and Clarification.
Associated Participant Behaviours	Self disclosure and self exploration Inhibit changes.	No association.	Self disclosure and self exploration Inhibit changes.
Associated Participant Perceptions of Leader	Perception of Leader as understanding, helpful and interested.	No association.	Perception of Leader as understanding, helpful and interested Inhibit changes.

8.2 Interpretation of Results

(a) Individual Measures

(i) Self Concept. While it is tempting to suggest that the programme actually maintained the HETA group's overall level of self concept (as reflected in the Total Positive Score), an alternative explanation for the difference in scores over time between the HETA and comparison group can be found. The comparison group's overall self concept score actually decreased over time; this could be due to the effect of certain variables which would have been invisible to the experimenter. For example, organisational pressures may have been operating and affecting the self concept of members of the comparison groups for they were actually employed in a working situation. There may have been other reasons that their self concept decreased; perhaps participation in the evaluation may have evoked feelings of inadequacy and resulted in a lowered self concept score. In summary, it may be that the difference in scores

is related not to the programme, but to other variables not measured decreasing the comparison groups score.

With respect to the HETA groups significant changes in level of self criticism and consistency of self concept, inspection of the means does not suggest other factors which may have led to the changes. It seems reasonable to suggest that the programme did play a role in these changes in the HETA group.

If the explanation suggested above about not interpreting the significant differences in terms of the programme's impact on the HETA group is accepted, the next logical question to ask is, why may have the programme not impacted more on participants' self concept? A reasonable response seems to be that the HETA group's level of self concept (as a group) was not particularly low, certainly not in comparison to both the able bodied group, nor in comparison to the means published and available in the Manual for the self concept test. If this is so, it would be much harder to provoke changes in such a group. Inspection of the new data suggests that those individuals who scored lowest on individual subtests tended also to show the greatest changes on those subtests. One must be careful, however, in the interpretation of such changes, as they may be prone to a regression effect, low scores regressing towards the population mean.

(ii) Vocational Maturity. Results here suggest that the programme contributed to the HETA group's increased level of vocational maturity. Inspection of means shows that the comparison group's level stayed about the same while the HETA group's scores changed in the desired direction. In addition, the HETA group did initially score lower on this variable than their able bodied counterparts. However, while it may be reasonable to suggest that the programme did serve to improve the HETA group's level of vocational

maturity, it must be noted that perhaps regression effects could account for the observed changes.

(iii) Independence Skills. In that it is not possible to compare the HETA group's score here with the comparison group (to whom the scale was not administered), interpretation of results is necessarily limited. It might be noted however, that although the programme cannot be said to have produced the changes in score on this variable, the magnitude of the changes in the independence skills of the HETA group, is noticeable. It may be reasonable therefore to suggest that the programme contributed to these changes, especially in the light of some changes in self concept and the observed change in vocational maturity.

(b) Content Analysis as it relates to changes in Individual Measures

The following points seem to be reasonable in the context of the results achieved (see table presented earlier in this chapter).

(i) Leader behaviours of warmth, empathy and clarification are associated with changes in the HETA group's level of self concept and independence skills, as long as these leader behaviours do not provoke participants' self disclosure and self exploration. This is very interesting in that the literature suggests that in fact self disclosure and self exploration are associated with client change in groups. This literature, however, refers primarily to adults, and it may have been that such activity actually produced anxiety in these HETA adolescents. In addition, the HETA group were also inexperienced in these kinds of activities of self disclosure and self exploration. It is possible that anxiety may have resulted which may explain the inhibitory nature of these two aspects of participant behaviour.

(ii) While perception of the leader as understanding, helpful and interested was related to changes in self concept, such perceptions actually inhibited changes in independence skills. This may suggest that different processes are involved in changing a variable like self concept, compared with those involved in changing independence skills. It may be that affecting independence skills (which are defined behaviourally in this evaluation) involves the leader being perceived as someone who makes demands of participants, rather than being entirely accepting of them. Yet leader behaviours of warmth and clarification are associated with changes in independence skills, so it may be more important for leaders to behave in an accepting way than to be perceived as doing so by the participants.

(iii) The one individual measure to show change which could be attributed to the programme, that is, vocational maturity, in fact was not associated with any aspect of leader behaviour or participant perception. It was in fact negatively associated with one aspect of participant behaviour, and that was participation. It seems logical to suggest that the data (as they were collected) are such that they provide no explanation for what in the programme may have been associated with change in vocational maturity. This point leads us to consideration of the problems faced in interpretation of the results.

8.3 Problems of Interpretation

The main difficulty lies in establishing causal links between changes on individual measures, and the process of the group session, as measured by the Content Analysis and the Participant Questionnaire. This difficulty is mainly due to two things: the fact that the statistical procedure used (Pearsons Correlation) gives information about the presence of linear relationships which are not necessarily causally linked, and the design of the Content Analysis.

(a) Correlations

While one can identify associations between variables which are significantly correlated, this does not mean that one variable causes the other. In the context of this evaluation, this means that positive correlations may give important information about conditions in which changes occur, but not information about conditions necessary or essential for change to occur. The point is whether one can claim that certain variables are essential to or rather associated with change.

(b) Design of Content Analysis

The design itself was such that it was not possible to collect information on interactions between specific participants and leaders. Thus, the effect of leader behaviour was investigated indirectly, by correlating the means of various leader behaviours, with means of participant behaviours. These participant behaviours were then correlated with the change scores. If the experimenter had been able to observe the sessions, then data could have been collected where the direction of leaders' comments could have been included, and then correlated directly with participant change. That is, correlations could have been calculated between individual participant change scores, and the number of leader warmth, etc. statements made to those particular participants. This would have been a far more satisfactory way of identifying leader behaviours associated with client change. It was not possible, however, because of practical limitations of the evaluations, which will now be further considered.

8.4 Limitation of the Evaluation

The limitations of this evaluation are related predominantly to practical problems inherent in field research. These problems affected the ultimate choice of methodology and data collecting procedures. Both the practical problems and their effect on choice of methodology will now be discussed.

(a) Practical Problems

The first problem here was the small number of people in the HETA programme (final data analysis consisted of results from 6 people). This meant that not only was random assignment out of the question (even if the agency could have been convinced of its advantages), but so was a Time Series design. This made the selection of a comparison group inevitable, and ultimately the best choice possible was made. Nevertheless, the group chosen as a comparison group were different to the HETA group in one way: they were already in a work situation in that they were employed in a sheltered workshop setting. Their markedly different context and environment created the possibility of a number of threats to the design, which will be mentioned below.

Another important practical limitation was the role of the evaluator. The evaluator was not an outsider to the agency, and so was subject to certain pressures within the agency. The primary restriction was lack of control over time distribution, in that the evaluator was employed by the agency to work primarily as a clinical psychologist. This meant that, for example, the design of the Content Analysis had to be such that ratings could be done post sessions, which in turn led to a limitation described above. It also meant that the evaluator sought the assistance of other staff (eg. in administering the independence skills test to the comparison group) without having the authority to ensure their assistance. Consequently part of the test battery was not administered to the comparison group, limiting ultimate interpretation of the results from the independence skills measure.

(b) Effects on Methodology

The fact that randomization was not possible because of small numbers, and the consequent fact that a particular comparison group was chosen, has important implications for the design of the evaluation. It is likely that the

comparison group's different context may have involved hidden variables affecting results, especially in relation to the difference in overall self concept scores, as discussed above. It is possible then, in Campbellian terms, that the internal validity of this design was threatened by events outside of the experimental variable occurring between pre- and post-test conditions (Campbell, 1969).

The other point to be made is to do with the problem of regression effects where low scores are likely, over time, to move towards the mean. It is possible that change scores could be the result of regression effects rather than impact of other variables.

8.5 Final Conclusions

Given the findings and limitations referred to above, it seems reasonable to draw the following points:

(a) Given that the HETA group's self concept was not particularly low, it may be inevitable that overall it will not have been dramatically affected.

(b) While it is possible that the programme improved the HETA group's vocational maturity, there are no suggestions in the available data as to what may have been associated with this improvement.

(c) With respect to changes in independence skills, although these cannot be attributed to the programme, the data do suggest what may have inhibited change. In addition, it identifies two leader behaviours as being positively associated with change on this variable.

(d) Participant self disclosure and self exploration may not be as important in groups with disabled adolescents as the literature suggests it is with adult able bodied groups. It may in face be desirable to ensure it does not actually occur to any great extent in groups with disabled adolescents.

(e) It may be desirable for participant perceptions of the leader to vary, depending on the variable the leader is intending to affect (eg. self concept vs independence skills).

(f) Despite the small numbers of subjects in this evaluation, and the limitations of the study, trends towards change do emerge. While there is not a great deal of useful information about what may be associated with these trends, it seems reasonable to suggest that enough evidence exists to support the view that HETA did in fact impact positively on its participants.

8.6 Recommendations for Further Research

The areas for further research which are particularly relevant to this evaluation are not only those associated with the 3 variables investigated (self concept, vocational maturity and independence skills), but also those areas related to conditions necessary for changes to occur in groups of disabled adolescents. The existing literature on change in groups seems to suggest the importance of variables which may in fact be contra-indicated in groups with disabled youngsters.

A further area which could most usefully be developed is an overall conceptual framework addressing itself to important variables which may be particular to disabled people. While there may be an argument which would see this as an undesirable consequence of seeing disabled people as different from able bodied people, it would certainly help experimental investigators. Such a framework could also underline the very real fact that disability in our society does have consequences, a number of which are negative and psychologically painful. It could then, in this way, also make a contribution towards influencing attitudes (and their behavioural ramifications) to the ultimate advantage of the disabled population.

8.7 Final Comments

Having addressed in some detail the results of the evaluation itself, it is important to address the relevant conceptual issues in this thesis.

The first is to do with the nature of the literature identified as relevant to the evaluation. As mentioned before, the theoretical literature on the disabled provided no clear direction as to which variables ought to be addressed in research with disabled people. If anything, this literature was particularly fraught with contradictions.

The group therapy literature was, however, a little more helpful. While focussing largely on adults, it did suggest quite clearly that leader variables of warmth, empathy and clarification were related with participant change across a variety of different sorts of groups aimed at different populations. The results of this study were largely consistent with this literature although not entirely so; it has been suggested above that the participants in this study being adolescents rather than adults, might have contributed to the results.

The second point to be made in this discussion related to the design of the study. Due to practical problems inherent in most field research as well as problems unique to this particular study, the design was in many ways limited. Putting these difficulties to one side, however, a case can be made to support interpretation of the evaluation results in case study terms. The case study has become, as mentioned before, increasingly acceptable as a viable form of field research. Given the small numbers of subjects in this study and the intent of the study (that is to generate a picture explaining causal links between variables) this evaluation can be accepted within the case study framework.

The third point of relevance is to the social context of this sort of evaluation. Comment at two levels seems appropriate. First, when this evaluation was conducted, there was mounting pressure on social services to

justify their existence for funding purposes. Part of the raison d'etre for this evaluation must be located within this context. Second, it would be fair to say that disabled people as a minority group have (certainly in the past) attracted far fewer research funds than have other groups. It makes sense then that the literature on the disabled at the time of the study per se would be lacking in direction or substance. A further point to be made again is that the researcher herself was subject to certain pressures (for example, with respect to time alloted to the study) which, in turn, limited the design of the content analysis for example. All of these influences ought to be taken into account when ultimately trying to make sense of this kind of research, and indeed this particular piece of field research.

What comments then can be made regarding the extent to which it was possible to integrate theory and research in this instance of field research? Given the kinds of problems outlined and discussed to date, a fair conclusion must be one which rests on the following points:

(a) In retrospect, there were many variables and influences which mitigated against a clear outcome regarding the efficacy of this HETA programme.

(b) Despite the many problems, there is enough to suggest that further work of this kind could be helpful to disabled people and professionals who work with them in this kind of context (i.e. vocational training).

(c) In an area where the literature is generally an impoverished one and the population a minority group in societal terms, field research is fraught with difficulties. An obvious point with which to conclude must be that this may indicate a greater need to allocate resources for research.

APPENDICES

A. DESCRIPTION OF DISABILITIES

B. EXPLANATION OF CATEGORIES

C. PARTICIPANT QUESTIONNAIRE

D. DATA TABLES

APPENDIX A : DESCRIPTION OF DISABILITIES

Cerebral Palsy

While there are a number of definitions the most common description refers to cerebral palsy as a motor dysfunction due to brain damage. There are different causes of cerebral palsy and include pre-natal problems (like german measles, viral infections, poor placental nutrition), complications during labour and post-natal infections like meningitis and encephalitis. The area of brain damage may vary with different causes and may be minimal to very severe. Accordingly motor problems can be less severe such that the person can walk and be reasonably independent or more severe such that the person is completely dependent in the areas of feeding, toiletting and mobility. Associated problems can include some degree of intellectual impairment, visual and hearing defects, loss of sensation, and an inability to assess their position in space. With respect to the latter, a person with cerebral palsy may be able to see a gutter for example, but may not be able to judge its depth, width and how to step over it.

The HETA adolescents who had cerebral palsy were not severely affected by the disability, and were able to walk, talk, feed themselves, and toilet themselves. Their intellectual impairment was also not severe, in that they were at about the borderline level of functioning with IQ's in the 80-100 range.

Spina Bifida

Spina Bidifa is an open defect of the spinal canal which is due to abnormal fetal development. There are three distinct but similar conditions in this disability.

Myelomeningocele : this is where an outpouching of the spinal cord occurs through an opening at the back of the vertebral column where bone has failed to fuse.

Meningocele : this is almost the same as Myelomeningocele, except that the outpouching consists only of the coverings of the spinal cord, and not the cord itself.

Spina bifida occulta : here there is no outpouching of the spinal cord but only a defect where the back arches of the vertebrae have failed to form. The bony defect is covered with skin.

The associated disabilities of spina bifida include paralysis of the trunk and lower limbs, bony deformation (eg. dislocation of the hip, clubfoot, severe turned in feet, spinal curvature), loss of sensation (loss of skin sensation to touch), bladder paralysis, bowel paralysis and hydrocephalus (where the spinal fluid circulation in the brain is blocked). Hydrocephalus occurs in about 90-95% of children with myelomeningocele, and results in intellectual retardation which can range from creating severe to moderate problems.

Children who have lower limbs paralysis need crutches for walking, and children who have trunk and hip paralysis need a wheelchair for most community activities.

As with the HETA adolescents with cerebral palsy, those with spina bifida were able to walk independently, toilet themsleves, feed themselves and had IQ's in the borderline range

Rhumatoid Arthritis

This is essentially inflammation of multiple joints which may spread to other parts of the body. Accordingly deformities occur, some of which can sometimes be corrected by surgery. The condition can be a particularly painful one especially when the inflammation is active. During this time it may be more comfortable for the child to use a wheelchair for mobility. When the inflammation is not active, there can be periods of months without pain and discomfort. Intellectual functioning is not affected by this disability.

The HETA adolescents with rhumatoid arthritis were mobile, able to walk, feed and toilet themselves, and had IQ functioning closer to the normal range than some of the other youngsters.

APPENDIX B : EXPLANATION OF CATEGORIES

LEADER AND PARTICIPANT CATEGORIES USED IN THE CONTENT ANALYSIS

1. LEADER CATEGORIES

(a) Positive Reinforcement

Comments falling into this category are those praising or encouraging a group participant or the group in general. A further delineation is made between single words like "great, good, terrific" and "That was good work group" or "Gee, I'm really glad you shared that with us".

(b) Understands

This category includes only those comments made by the group worker which reflect or mirror understanding of a feeling experienced by the group participant, eg. "It sounds as if you felt really scared during that interview" or "You must be so angry at that supervisor". That is, this is a category associated only with reflecting group members' feelings as opposed to reflecting ideas or thoughts.

(c) Clarifies

This category is a non-feeling category and refers to those comments made by the group worker which are a repetition, restatement summary or clarification of a group member's idea, thought or contribution. For example, if a group member says: "And they they told us about all the different kinds of work you can do at Bedford". The group worker's response would be categorised under "Clarifies" if he said: "Aha, so one of the things you learned during that visit was the different jobs you could do if you worked at Bedford", or: "So they told you all about the different jobs at Bedford, did they?".

(d) Social Education

These are comments which give information about societal norms and/or expectations, eg. "If you don't mix with people at work, they might not want to have much to do with you as well". Or: "If you're working as a car mechanic, then you don't wear your best clothes to work every day".

Comments classed under this category can vary from information about norms in personal hygiene to norms in peer groups in the work situation. They are essentially aimed at educating the group members about society and its established norms.

(e) Prompting

These are comments which prompt or encourage group members to participate, and they can be aimed at individuals in the group or the group as a whole, eg.: "What do you think about that group?". Or: "Come on Jenny, give us some of your ideas". They can also be specific questions, eg.: "Did you enjoy that session" or: "Group, I want you to tell me about how you felt during that day you were out on Work Skills".

(f) Facilitation

This category includes those comments made by the group worker which lead the group member to explore his own attitudes, thoughts and feelings. One characteristic of a "facilitation" is that it is part of a dialogue between group worker and group member where no one else in the group verbally participates. That is, when the group worker focuses on one group member and encourages exploration of self, then his remakrs will be classified under "Facilitation". For example:

Group member: "I really hated that place."

Group Worker: "Oh-huh Jenny, what was it about being there that gave you such strong feelings?"

Group member: "Well I don't know, it was the people I guess and the place itself, you know what I mean?"

Group Worker: "You sound a bit confused. Was it mainly the people that made you dislike the place I wonder?"

Every comment made by the leader in dialogue above would be rated under "Facilitation" except "You sound a bit confused?" This would come under "Understands" because it is a reflection or an attempt to understand the group member's feeling.

In summary then, leader behaviour categories are as follows:

a) Positive Reinforcement, i.e. praising, "stroking" or positively reinforcing specific group members or the group as a whole.

b) Understands, i.e. reflecting or mirorring understanding of a group member's feeling experience (A feeling category).

c) Clarifies, i.e. repeating, restating, summarising or clarifying a group member's idea, thought or contribution in discussion (A non-feeling category).

d) Social Education, i.e. giving information about societal norms and or expectations, either to specific group members or to the group as a whole.

e) Prompting, i.e. encouraging or prompting group members to participate by asking specific or general questions of either individual group members or the group as a whole.

f) Facilitation, i.e. encouraging one specific group member to explore his throughts, feelings or attitudes, i.e. to explore self or any aspect of self.

2. PARTICIPANT CATEGORIES

Having discussed the rating system used to rate verbal behaviour of group leaders, it is now appropriate to describe the categories devised to measure the verbal behaviours expected of group members.

(a) Positive Comments

Comments to be rated under this category are those which are positive, encouraging or praising, either of self, individual others in group (including group leader) and/or the group as a whole,

eg. : "Good, Brenton"
or : "What a great idea, Jenny"
or : "Yea yea I like that, John"

(b) Negative Comments

These are comments made by group members which discount or devalue other individuals in the group (including group leader) or the group as a whole,

eg. : "Oh, shut up Jenny, will you?"
or : "What a stupid thing to say - oh boy!"

(c) Understands

These are comments which convey understanding of other group members' ideas, thoughts or feelings,

eg. : "Yea, I know what you mean Jenny"

or : "Are you trying to say that really you hated the idea of leaving home then, John?"

or : "You must have felt really terrible when they said that to you".

This category is not as specific as the "Understands" category for leaders, for it is unreasonable to expect group members to be skilled enough for specific reflection of feelings. It is reasonable however to expect some attempt at expressing understanding (however general) of other group members' experiences or thoughts.

(d) Self Disclosure

This category includes comments made by group members which communicate information about themselves. They are comments that express feelings experienced, values held and/or beliefs about self. For example, the following would be rated under "Self-Disclosure":

"You know, being able to make some friends then was a really important thing for me."

"No, I didn't like it -- I hated it actually."

"I really believe that I'm as good as any one who isn't handicapped."

This category is divided into prompted self disclosure and umprompted self disclosure. That is, if a group member self discloses in direct response to a group leader's or group member's question, then this rated under prompted self disclosure. If not, then his comment is rated under unprompted self disclosure.

(e) Response to Prompt

These are ideas, thoughts, comments which are made by group members in response to a group leader's question, or comment. That is, whenever a group leader makes a "prompt" (i.e. a comment which can be rated under the category of "prompt") the first response made by a group member is classified under "Response to Prompt" unless it is a "self-disclosure", "positive comment" or "negative comment". For example:

<u>Group Worker</u>: "Well what happened just then in the group?"

<u>Group Member</u>: "Jenny didn't answer the question............

And also, we didn't give any suggestions either"

<u>Group Worker</u>: "So, whose responsibility is it to learn here?"

<u>Another Group Member</u>: "All of ours.......... Pause ....

I think that Bedford would be a good idea for you, Jenny.........."

The two comments "Jenny didn't answer the question" and "All of ours" are rated under "Response to Prompt".

(f) <u>Initiation</u>

Comments rated under this category are those which are made by group members spontaneously and are related to the topic under discussion. That is, those comments which do not directly follow a prompt and are ideas, and thoughts, rather than feelings. In the dialogue above "And also we didn't give any suggestions either" and "........I think that Bedford would be a good idea for you Jenny" come under the category "Initiation".

(g) <u>Asking Questions</u>

These are factual questions asked by group members related to the topic under discussion, and directed to the group leader or the group as a whole, <u>not</u> to individual group members. That is, questions asking for information or clarification of meanings of words or ideas would be rated under this category. For example:

"What does "exemplary" mean?"

"What do you mean "clocking" off?"

(h) <u>Awareness of Others</u>

These are comments made to other group members expressing awareness of their needs or wants, wishing to encourage them to participate, wishing to draw them in. That is, questions put directly to other specific group members which indicate awareness of others, would be rated under this heading:

"Sheryl, did you hear that?"

"Brenton, what do you think about that?"

"Come on Vicki, help us out here!"

"Yea but Greg, how does that affect your feelings on the subject?"

(i) Social Education

Comments, both specific and general, made by group members, referring to social norms, values and expectations in the work situation or in any other area of behaviour:

"People don't like it when you always ask questions and never let them say a word".

"Employers probably want someone who can do what they tell them - they don't want a person to just sit and do nothing all day".

(j) Exploration

Any comment made in response to a group worker's "Facilitation". Comments rated under "Exploration" are those which indicate exploration of group members own thoughts, ideas or feelings. For example:

Group Member: "I think that's wrong! -- you should always say what you think".

Group Leader: "That's important for you huh? What makes it important, Jenny?"

Group Member: "Well, if you don't say what you think, then people might get the wrong idea about you or something."

Group Leader: "And what might they think about you?"

Group Member: "That you're not a strong or confident person and maybe then they might start treating you badly — I'd hate that".

All of the comments made by the group member would be rated under "Exploration" except "I think that's wrong -- you should always say what you think" which would be either a "Response to Prompt" or an "Initiation" depending on the previous verbal interchange. In addition "I'd hate that" would come under "Self-Disclosure - Unprompted".

In summary then, participant behaviour categories are as follows:

a) Positive Comments, i.e. praising, encouraging self, specific others or the group as a whole.

b) Negative Comments, i.e. discounting, devaluing specific others or group as a whole.

c) Understands, i.e. conveying understanding of other group members' ideas, thought or feeling. This is both a feeling and non-feeling category and includes specific and vague comments.

d) Self-Disclosure, i.e. communicating information about self, which includes expressing feelings experienced, values held and/or beliefs about self, related to the past, present or future. (Divided into Prompted S.D. and Unprompted S.D.)

e) Response to Prompt, i.e. comments made in direct response to group leader's "Prompt" expressing thought or idea related to topic under discussion.

f) Initiation, i.e. comments made spontaneously (i.e. not following a "Prompt") expressing thought or idea related to topic under discussion.

g) Asking questions, i.e. factual questions related to topic being discussed and directed either to the group leader or group as a whole (not to individual group members).

h) Awareness of Others, i.e. questions directed to other group members, expressing awareness of their needs or wants, encouraging their participation or drawing them into the group.

i) Social Education, i.e. comments about societal values, norms, expectations.

j) Exploration, any comment made in response to a group worker's "Facilitation", i.e. exploration of own thoughts, ideas, feelings.

APPENDIX C : PARTICIPANT QUESTIONNAIRE

NAME...

(1) How well did your group leader seem to understand what you were feeling and thinking this session?

1. Misunderstood
2. Didn't understand too well
3. Understood pretty well, but missed some things
4. Understood very well
5. Understood exactly

(2) How helpful was your group leader to you this session?

1. Not at all
2. Slightly
3. Somewhat
4. Very
5. Completely

(3) How interested in you was your group leader during this session?

1. Not at all
2. Slightly
3. Somewhat
4. Very
5. Completely

(4) How much did your group leader encourage you to say what you wanted this session?

1. Not at all
2. Slightly
3. Somewhat
4. Very much
5. Completely

(5) How much did your group leader encourage you to make suggestions and contributions to the group this session?

1. Not at all
2. Slightly
3. Somewhat
4. Very much
5. Completely

(6) How much was your group leader more attentive to others than to you?

1. Not at all
2. Slightly
3. Somewhat
4. Very
5. Completely

(7) How much did your group leader encourage you to think about yourself, your future and your relationships with others?

1. Not at all
2. Slightly
3. Somewhat
4. Very much
5. Completely

(8) How much did you learn about yourself this session?

1. Nothing at all
2. Just a little
3. A few new things
4. Quite a lot
5. Not very much

(9) How interested were you in this session?

1. Not at all
2. Slightly
3. Somewhat
4. Very
5. Completely

(10) How much did you talk or contribute this session?

1. Not at all
2. Slightly
3. Somewhat
4. Very much
5. Completely

(11) How much did you talk about yourself this session?

1. Not at all
2. Slightly
3. Somewhat
4. Very much
5. Completely

(12) How satisfied were you with this session?

1. Not at all
2. Slightly
3. Somewhat
4. Very
5. Completely

APPENDIX D : DATA TABLES

TABLE A : Pearsons Correlations on the change scores of the Self Concept Scale (TSCS), Vocational Maturity (CMI) and Independence Skills (AFF).
(Significant at .1 level; significant correlations are underlined)

TSCS	CMI	AFI 1	AFI 2	AFI 3	AFI 4	AFI 5	AFI 6
Self Criticism	**.89**	.05	.56	**-.69**	-.36	**.67**	-.28
Total	**.63**	.47	-.27	.15	.44	**.69**	.59
Identity	**.77**	-.40	-.44	.06	-.32	.53	.15
Self Satisfaction	.26	.12	-.01	.75	.09	.06	.03
Behaviour	.34	**.69**	.58	.26	**.78**	.33	.60
Physical Self	.42	-.22	-.27	-.09	.33	.07	.46
Moral Ethical	**.90**	-.45	.23	.07	.05	.69	.52
Personal Self	.43	.55	.41	**.74**	**.93**	.57	**.88**
Family Self	**.62**	-.25	.27	.08	-.14	.66	.35
Social Self	**.70**	-.14	.32	.38	.16	.35	.38
Variability	.19	.39	-.01	**.78**	**.80**	.15	**.62**
CMI		-.43	.42	-.10	-.06	**.65**	**.62**

TABLE B : Hotellings t squared on differences in Self Concept Change scores, of the HETA and control group. (Significant at .05 level; significant correlations are underlined)

TSCS Subtest	t Value	Probability
Self Criticism	2.19	<u>.043</u>
Total	2.20	<u>.042</u>
Identity	-0.20	.844
Self Acceptance	1.71	.106
Behaviour	-0.18	.857
Physical Self	1.53	.144
Moral Ethical	0.63	.536
Personal Self	-1.34	.200
Family Self	-0.04	.971
Social Self	1.47	.161
Variability	-2.61	.019

T^2	F	Degrees Freedom	Significance
139.5807	4.7584	11, 6	.0340

TABLE C : Pearsons Correlations within the Self Concept subscale scores for the HETA group, in the pre-test and post-test condition. ($p < .1$; significant correlations underlined)

META		TSCS										
		Self C.	Total	Iden.	Self Acc.	Behav.	Phys.	M.Eth.	Pers.	Family	Social	Variab.
Self Criticism	PRE		-.07	-.25	.14	.05	.37	-.12	.13	.10	**-.59**	**.53**
	POST		.03	.04	-.08	-.17	-.39	.25	.35	.16	**-.56**	**.63**
Total	PRE			.52	.62	**.92**	.00	.40	.36	**.52**	**.69**	-.47
	POST			.12	-.35	-.05	.32	-.43	.13	**-.32**	.49	.14
Identity	PRE				-.22	.29	.22	-.89	**.79**	-.27	**.71**	-.03
	POST				.44	**.88**	**.51**	**.56**	**.87**	.42	**.73**	.01
Self Acceptance	PRE					**.58**	.14	**.57**	-.33	**.76**	.08	-.38
	POST					**.81**	**.50**	**.86**	**.54**	**.86**	.24	-.43
Behaviour	PRE						-.25	.49	.27	**.63**	**.58**	-.43
	POST						**.78**	**.74**	**.79**	**.66**	.48	-.51
Physical Self	PRE							**-.52**	.11	.07	-.37	.17
	POST							.27	**.85**	.13	**.71**	-.27
Moral Ethical	PRE								-.09	.24	.19	-.24
	POST								.46	**.90**	.10	.27
Personal Self	PRE									-.48	.39	.41
	POST									.30	**.82**	.19
Family Self	PRE										.10	**-.55**
	POST										.08	-.43
Social Self	PRE											-.44
	POST											-.26
Variability	PRE											
	POST											

TABLE D : Pearsons Correlations within the Self Concept subscale scores for the Control Group, in the pre-test and post-test condition. ($p < .1$, significant correlations underlined)

CONTROL GROUP		TSCS										
		Self C.	Total	Iden.	Self Acc.	Behav.	Phys.	M.Eth.	Pers.	Family	Social	Variab.
Self Criticism	PRE		-.19	.27	-.40	-.15	.08	-.43	.38	-.00	.21	-.21
	POST		.32	.09	-.69	-.18	-.09	-.61	-.29	-.10	.09	.33
Total	PRE			.22	.48	.83	.78	.79	.73	.60	.54	-.08
	POST			.27	.65	.77	.23	.79	.47	.91	.65	.05
Identity	PRE				-.18	-.07	.37	.07	.25	-.04	.11	-.02
	POST				.08	-.22	-.03	-.15	.34	.35	.45	.24
Self Acceptance	PRE					.20	.31	.58	.13	.58	.06	-.39
	POST					.26	.19	.76	.29	.52	.40	-.38
Behaviour	PRE						.56	.62	.68	.50	.62	.18
	POST						.45	.64	.35	.63	.23	.07
Physical Self	PRE							.34	.70	.47	.11	-.48
	POST							-.02	-.13	.12	-.49	-.52
Moral Ethical	PRE								.35	.51	.64	-.01
	POST								.30	.64	.47	-.11
Personal Self	PRE									.20	.11	.18
	POST									.21	.42	.62
Family Self	PRE										.66	-.11
	POST										.75	.03
Social Self	PRE											.21
	POST											.48
Variability	PRE											
	POST											

TABLE E : Pearsons Correlations for Leader Behaviours with Participant Behaviours.
(Significant at .05 level; significant correlations underlined)

PARTICIPANT BEHAVIOURS	LEADER BEHAVIOURS					
	Warmth	Empathy	Clarifies	Social Ed.	Prompts	Facilitates
Positive Comments	_.31_	_.31_	_.49_	_.32_	.08	_.37_
Negative Comments	_.60_	.17	_.26_	-.12	.17	-.02
Understands	-.00	.15	-.09	.10	-.11	.19
Explores	-.08	_.32_	_.48_	_.72_	.00	_.80_
Self Disclosure Prompt.	-.02	_.30_	_.36_	_.56_	-.03	_.63_
Self Disclosure Unprompt.	-.20	.17	_-.27_	-.02	_-.25_	.09
Participation	_.41_	-.02	_.68_	_.27_	_.76_	.11
Initiation	-.07	.04	.09	-.19	_.34_	-.12
Questions	.08	.01	.01	-.10	-.11	-.08
Sensitivity	.22	.10	_-.26_	-.16	-.01	.03
Social Education	_.27_	.03	.15	-.06	-.00	.07

TABLE F : Pearsons Correlations for Participant Behaviour and Participant Change scores on Self Concept (TSCS), Vocational Maturity (CMI) and Independence Skills (AFI). (Significance $p < .1$; significant correlations underlined)

CHANGE SCORES	PARTICIPANT BEHAVIOURS										
TSCS	Positive	Negative	Under.	Expl.	Self Discl.	Self Discl. (Unp.)	Parti-cipation	Initiation	Questions	Sens.	Social Ed.
Self Criticism	.10	.39	-.33	-.43	.22	-.17	.14	.19	.93	-.13	.37
Total	.12	-.31	-.10	.69	.38	.13	.09	-.03	-.77	-.05	.25
Identity	-.04	-.35	-.06	.12	.34	-.12	.05	.23	-.1936	.06	.21
Self Satisfaction	.40	.81	.40	-.24	-.03	.42	.19	.46	.77	.40	-.35
Behaviour	.01	-.35	.27	.28	-.26	.21	.13	-.18	-.83	.17	-.07
Physical Self	.39	-.20	.42	-.54	-.43	.45	.77	.23	.11	.55	.05
Moral Ethical	.42	-.18	-.33	-.93	-.73	-.38	-.01	-.57	.45	-.34	.50
Personal Self	.63	.34	.61	.08	.23	.63	.65	.76	.04	.76	-.49
Family Self	.40	-.21	-.17	-.87	-.54	-.32	-.06	-.28	.48	-.17	.04
Social Self	.77	-.72	-.32	.28	-.21	-.55	-.88	-.72	-.69	-.61	-.15
Variability	.25	.31	.33	.41	-.08	.38	.02	-.01	-.32	.18	-.07
CMI	-.66	-.42	-.06	-.28	-.54	-.39	-.76	-.55	-.14	-.36	-.45
AFI											
Basic work habits	-.06	.03	-.40	-.25	-.18	-.20	.09	-.38	.20	-.33	.83
Work skills	-.65	-.25	-.69	-.38	-.24	-.70	-.60	-.68	.35	-.77	.52
Acceptance skills	-.37	-.67	-.16	-.17	-.55	-.22	-.05	-.64	-.59	-.26	.38
Personal routines	-.15	.01	.03	-.38	-.69	.02	.03	-.50	-.04	-.11	.34
Community Awareness	-.74	-.35	.38	-.75	-.75	.57	.51	-.77	.27	-.56	.23
Social Maturity	-.51	-.18	.02	-.41	-.89	-.19	-.37	-.68	-.01	-.26	-.01

TABLE G : Pearsons Correlations for Leader Behaviours and Participant Perceptions.
(p < .05 significant correlations underlined)

PARTICIPANT QUESTIONNAIRE		LEADER BEHAVIOURS					
		Warmth	Empathy	Clarifies	Social Ed.	Prompts	Facili-tates
Q1		.09	.12	.22	.05	.14	.14
Q2		.14	.17	.16	.06	.10	<u>.23</u>
Q3	Perception	.10	.08	.11	.05	.02	.23
	of						
Q4		.18	.16	.07	-.04	-.02	.17
	Leader						
Q5		-.20	-.05	.02	.06	-.04	.16
Q6		-.12	.19	.02	.09	.09	<u>.28</u>
Q7		-.07	.15	.20	.18	<u>.25</u>	<u>.38</u>
Q8	Perception	-.03	.01	.06	.09	.09	.22
	of						
Q10		.18	-.08	-.08	-.12	-.16	-.03
	Self						
Q11		-.02	.15	.16	-.01	.01	.16
Q9	General	.04	-.09	.00	-.07	-.03	.00
	Attitude						
Q12		.03	-.21	.09	-.99	-.03	-.00

TABLE H : Pearsons Correlations for Participant Perceptions and Participant Change scores on Self Concept (TSCS), Vocational Maturity (CMI) and Independence Skills.

CHANGE SCORES	PARTICIPANT QUESTIONNAIRE											
	Perception of Leader							Perception of Self			Gen. Attitude	
TSCS	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q10	Q11	Q9	Q12
Self Criticism	.26	.35	-.63	-.56	-.35	-.56	-.64	-.45	-.50	-.73	-.80	-.37
Total	-.49	.21	.37	.64	.27	.73	.23	.39	.30	.52	.45	.25
Identity	.34	.43	.44	.13	-.04	-.47	.28	.47	.24	.33	.11	-.01
Self Satisfaction	.39	-.14	-.36	-.30	.03	-.60	-.33	-.41	-.22	-.74	-.48	-.37
Behaviour	-.16	.49	.72	.72	.53	.65	.74	65	.66	.88	.91	.66
Physical Self	.77	.80	.70	.55	.74	-.20	.78	.83	.82	.65	.64	.89
Moral Ethical	.18	-.22	-.26	-.43	-.16	.01	.01	-.12	-.12	.07	.05	.41
Personal Self	.78	.88	.76	.60	.62	-.61	.61	.76	.71	.35	.39	.29
Family Self	.52	.01	-.05	-.50	-.23	-.55	.12	.03	-.05	.05	-.10	.18
Social Self	-.74	-.51	-.20	-.33	-.53	.53	-.12	-.39	-.38	.11	.07	.28
Variability	-.44	-.11	.02	.34	.31	.65	.01	-.15	.08	-.31	.25	.06
CMI	-.16	-.40	-.22	-.61	-.52	-.11	-.05	-.43	-.07	-.36	-.10	-.29
AFI												
Work habits	-.35	-.35	-.39	-.05	-.66	.60	-.27	-.21	-.18	-.05	-.70	.29
Work skills	.51	-.74	-.90	-.85	-.75	.22	-.73	-.84	-.83	-.55	-.65	-.39
Acceptance skills	-.29	.12	.34	.31	.21	.77	.50	.37	.35	.78	.68	.72
Personal R.	-.29	-.17	-.08	.05	.21	.63	.16	-.08	.09	.21	.33	.51
Community Awareness	-.13	-.56	-.49	-.73	-.51	.06	-.21	-.49	-.44	-.14	-.21	.02
Social Maturity	-.34	-.20	-.35	-.16	-.12	.33	.10	-.30	-.12	.08	.10	.24

($p < .1$ correlations underlined)

TABLE I : Pearsons Correlations for Participant Verbal Behaviour and Participant Perceptions. ($p < .05$)

PARTICPANT BEHAVIOUR	PERCEPTION : Perception of Leader							Perception of Self			General Attitude	
	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q10	Q11	Q9	Q12
Positive	.03	.14	.11	.15	-.15	-.03	.09	.05	.11	.18	.08	.00
Negative	-.09	-.16	-.24	-.00	-.17	-.08	-.34	-.36	-.05	-.22	-.32	-.34
Understands	.23	.19	.21	.23	-.05	.25	.11	.33	.12	.26	.07	.09
Exploration	.18	.22	.22	.20	.09	.23	.31	.27	.04	.19	.07	.01
Self-Disclosure Prompt	.24	.26	.22	.05	.13	.16	.26	.19	.05	.25	.09	.02
Self-Disclosure Unprompt	.22	.16	.09	.10	.01	.15	.09	.30	.03	.25	.09	-.04
Participation	-.08	-.05	.02	-.09	-.15	-.11	.02	-.16	-.13	.21	-.19	-.14
Initiation	.06	.09	-.07	-.10	.04	-.00	.26	.33	.13	.30	.02	.10
Asking Questions	-.26	-.14	-.20	-.09	-.19	.04	-.23	-.21	-.06	-.13	-.08	-.35
Sensitivity	.00	.03	-.02	-.06	.09	.06	-.00	.12	.02	-.05	-.02	-.07
Social Education	.03	.03	.12	.09	-.34	-.09	-.16	-.01	.05	.07	-.03	-.00

Significant correlations are underlined

BIBLIOGRAPHY

ADLER, A. (1917a) Study of Organ Inferiority and its Psychical Compensations. New York: Nervous and Mental Disease Publishing Co.

ADLER, A. (1917b) The Neurotic Constitution. New York: Moffat, Yard.

ADLER, A. (1927) The Practice and Theory of Individual Psychology. New York: Harcourt Brace.

ARLUCK, E.W. (1941) A study of some personality characteristics of epileptics. Archives Psychology, 37, 263.

BACKUS, O.L. (1948) Speech defects. Bulletin National Association Secondary School Principals, 32, No. 151, 127-132.

BARKER, R.G. & WRIGHT, M.F. (1955) Midwest and its Children : Ihe Psychological Ecology of an American Town. Evanston, Ill.: Row, Petersen.

BARKER, R.G., WRIGHT, B.A. & GORICK, M.R. (1946) Adjustment to Physical Handicap and Illness : A Survey of the Social Psychology of Physique and Disability. New York: Social Science Research Council Bulletin 55.

BARKER, R.G., WRIGHT, B.A. MEYERSON, L. & GORICK, M.R. (1953) Adjustment to Physical Handicap and Illness : A Survey of the Social Psychology of Physique and Disability. New York: Social Science Research Council Bulletin 55.

BARRETT-LENNARD, G.T. (1962) Dimensions of therapist response as causal factors in therapeutic change. Psychological Monographs, 76, 43, Whole No. 51.

X BASS, B.M. (1962a) Reactions to "12 Angry Men" as a measure of sensitivity training. Journal of Applied Psychology, 46, 120-124.

BATTLE, C.V. (1974) Disruptions in the socialization of a young, severely handicapped child. Rehabilitation Literature, 35, 130-140.

BEAN, B.N. & HOUSTON, B.K. Self concept and self disclosure. Unpublished manuscript. University of Kansas.

BEDNAR, R.L. & KAUL, T.J. (1978) Experiential group research : current perspective. In A. Bergin & S. Garfield (Eds.), Handbook of Psychotherapy and Behaviour Change. Wiley & Sons Inc.

BEDNAR, R.L. & LAWLIS, G.F. (1971) Empirical research in group psychotherpy. In A.E. Bergin & S.L. Garfield (Eds.), Handbook of Psychotherapy and Behaviour Change. John Wiley & Sons.

BENT, R.J., PUTNAM, D.G., KIESLER, D.J. & NOWICKI, S.J. (1976) Correlates of successful and unsuccessful psychotherapy. Journal of Consulting and Clinical Psychology, 44, 149.

BERGIN, A.E. & GARFIELD, S.L. (1971) Handbook of Psychotherapy and Behaviour Change : An Empirical Analysis. John Wiley & Sons Inc.

BETZ, B. (1963) Bases of therapeutic leadership in psychotherapy with the schizophrenic patient. American Journal of Psychotherapy, 11, 1090-1091.

BEUTLER, L.E., JOHNSON, D.T., NEVILLE, C.W.Jr., & WORKMAN, S.N. (1972) "Accurate Empathy" and the A-B dichotomy. Journal of Consulting and Clinical Psychology, 38, 372-375.

BEUTLER, L.E., JOHNSON, D.T., NEVILLE, C.W.Jr., & WORKMAN, S.N. (1973a) Some sources of variance in 'accurate empathy' ratings. Journal of Consulting and Clinical Psychology, 40, 167-169.

BLANSFIELD, M.G. (1962) Depth analysis of organisational life. California Management Review, 5, 29-42.

BOARD, F.A. (1959) Patients and physicians' judgements of outcome of psychotherapy in an outpatient clinic. Archives of General Psychiatry, 1, 185-196.

BORUCH, R.F. (1981) Evidential problems in social program evaluation and their dialogues from engineering and the physical sciences, medicine, and an assortment of other disciplines. Studies in Educational Evaluation, 7, 131-149.

BOYD-TURNER, F.B. (1976) "Cerebral Palsy". Unpublished draft of talk on cerebral palsy.

BROIDA, D., IZARD, C. & CRUICKSHANK, W.M. (195) Thematic apperception reactions to crippled children. Journal of Clinical Psycholoogy, 6, 243-248.

BRONDZEL, R. (1963) Role playing as a training device in preparing multiple handicapped youth for employment. Group Psychotherapy, 16, 16-21.

BRUNSCHWIG, L. (1936) A Study of some Personality Aspects of Deaf Children. New York: Teachers College, Columbia University.

BUROS Institute of Mental Measurements. (1983) Texts in Print III. Edited by T.V. Mitchell.

CAIN, D.J. (1973) The therapist's and client's perceptions of therapeutic conditions in relation to perceived interview outcome. Dissertation Abstracts International, 33, 607 1B.

CARKHUFF, R.R. (1967) Toward a comprehensive model of facilitative inter-personal processes. Journal of Counselling Psychology, 14, 67-72.

CAMPBELL, D.T. (1969) Reforms as experiments. American Psychologist, 24, 409-429.

COOK, D., SLEATER, S. & KUNCE, J. (1974) Encounter groups and rehabilitation. The Journal of Applied Rehabilitation Counselling, 4, 157-163.

COOK, T.D. & CAMPBELL, D.J. (1979) Quasi-Experimentation. Chicago: Rand McNally.

CORAH, et al. (1963) A study of body image in children with cleft palate and cleft lip. Journal Genetic Psychology, 103, 133-137.

CRITES, J.O. (1969) Vocational Psychology. New York: McGraw-Hill.

CRONBACH, L.J. (1982) Designing Evaluations of Educational and Social Programs. Jossey-Bass Publishers.

CRUICKSHANK, W.T. (1951) The relation of physical disability to fear and guilt feelings. Child Development, Vol. 22, No. 4, 291-298.

CRUICKSHANK, W.M. (1955) Psychological Considerations with Crippled Children. Prentice-Hall Inc.

CRUICKSHANK, W.M. & DOLPHIN, J.E. (1949) A study of the emotional needs of crippled children. Journal of Educational Psychology, XL 295-305.

DICKENSON, W.A. & TRUAX, C.B. (1966) Group counselling with college underachievers : comparisons with a control group and relationship to empathy, warmth and genuineness. Personnel and Guidance Journal, 45, 243-247.

DONOFRIO, A.F. (1948) A study of the intelligence, achievement and emotional adjustment of crippled children in an orthopaedic hospital school. Doctoral Dissertation, New York University.

DRASH, P.W., GREENBURG, N.E. & MONEY, J. (1968) Intelligence and personality in four syndromes of dwarfism. In D.B. Check (Ed.), Human Growth. Philadelphia: Lea and Febiger. pp. 568-581.

ENGLISH, R.W. (1968) Assessment of change in the personal-social self perceptions of vocational rehabilitation clients. Unpublished Doctoral Dissertation, University of Wisconsin Madison.

FEIFEL, B. (1968) Feeling understood as a function of a variety of therapist activities. Unpublished Doctoral Dissertation, Teachers' College Columbia University.

FENICHEL, O. (1945) The Psychoanalytic Theory of Neurosis. New York: Norton.

FITTS, W.H. (1964, 1965) Tennessee Self Concept Scale Manual. Nashville, Tennessee. Counselor Recordings and Tests.

FITTS, W. & HAMMER, W. (1969) The Self Concept and Delinquency (Monograph 1). Nashville, Tennessee. Counselor Recordings and Tests.

FITTS, W. (1970) Interpersonal Competence : The Wheel Model (Monograph 2). Nashville, Tennessee. Counselor Recordings and Tests.

FITTS, W. et al. (1971) The Self Concept and Self-Actualization. (Monograph 3). Nashville, Tennessee. Counselor Recordings and Tests.

FITTS, W. (1972) Self Concept and Psychopathology (Monograph 4). Nashville, Tennessee. Counselor Recordings and Tests.

FITZGERALD, D.C. (1950) Success-failure and T.A.T. reactions of orthopaedically handicapped and physically normal adolescents. Journal of Personality, 1, 67-83.

FORD, J.D. (1964) Computer analysis of test for the measurement of social perception during human relations training. Document No. SP1373/001/00, Systems Development Corporation, Santa Monica, California.

GARFIELD, S.L. & BERGIN, A.E. (Eds.) (1971) Handbook of Psychotherapy and Behavior Change (First Edition). New York: Wiley.

GARFIELD, S.L. & BERGIN, A.E. (Eds.) (1978) Handbook of Psychotherapy and Behavior Change (Second Edition). New York: Wiley.

GIBB, J.R. (1971) The effects of human relations training. In A. Bergin & S. Garfield (Eds.), Handbook of Psychotherapy and Behavior Change. New York: Wiley.

GILBERT, D. & LESTER, J. (1970) The relationship of certain personality and demographic variables to success in vocational rehabilitation. Research Report. Orthopaedic Hospital, Los Angeles.

GINZBERG, E., GINSBERG, S.W., AXELFORD, S. & HERMA, J.L. (1951) Occupational Choice. New York: Columbia University Press.

GLUCK, M.R., McWILLIAMS, B.J., WYLIE, H.L. & CONKWRIGHT, E.A. (1965) Comparison of clinical characteristics of children with cleft palates and children in a child guidance centre. Perceptual and Motor Skills, 21, 806.

GOLDBERG, R.T., & JOHNSON, D.B. (1978) A comparative study of five groups of handicapped children in vocational rehabilitation. Scandinavian Journal of Rehabilitative Medicine, 10, 215-220.

GOLDBERG, R.T., BERNSTEIN, N.R. & CROSBY, R. (1975) Vocational development of adolescents with burn injury. Rehabilitation Counselling Bulletin, 19, 140.

GOODSTEIN, L.D. (1968) Psychological aspects of cleft palate. In D.C. Spriestersbach & D. O. Sherman (Eds.) Cleft Palate and Communication. Academic Press.

HAGGARD, E.A., BREKSTAD, A. & SKARD, A.G. (1960) On the reliability of the anametic interview. Journal of Abnormal Social Psychology, 61, 311-318.

HARRISON, R. (1962) Impact of the laboratory on perception of others by the experimental group. In C. Argyms, Interpersonal Competence and Organisational Effectiveness. Homewood, Ill.: Irwin, pp. 261-271.

HEBERT, D.J. (1968) Reading comprehension as a function of self concept. Perceptual and Motor Skills, 27, 78.

HEISLER, V. (1974) Dynamic group psychotherapy with parents of cerebral palsied children. Rehabilitation Literature, 35, 329-330.

HENDERSON, E.M., LONG, B.H. & ZILLER, R.C. (1965) Self-social constructs of achieving and non-achieving readers. Reading Teacher, 19, 114-118.

HENDERSON, E.H. & LONG, B.H. (1971) Personal social correlates of academic success among disadvantaged school beginners. Journal of School Psychology, 9, 101-113.

HICKS, J. & WIEDER, D. (1973) The effects of integration group counselling on clients and parents in a vocational rehabilitative agency. Rehabilitative Literature, 34, 358-368.

HOLDER, T., CARKHUGG, R.R. & BERENSON, B.G. (1967) Differential effects on the manipulation of therapeutic conditions upon high and low functioning clients. Journal of Counseling Psychology, 14, 63-66.

HOLLAND, J.L. (1959) A theory of vocational choice. Journal of Counseling Psychology, Spring, 6:1:35-45.

HOLLAND, J.L. (1966) The Psychology of Vocational Choice. Waltham, Mass.: Blaisdell.

HOLLAND, J.L. (1973) Making Vocational Choice, a Theory of Careers. Englewood Cliffs, New Jersey: Prentice Hall.

HOLLON, T. (1972) Modified group therapy in the treatment of patients on chronic henodalysis. American Journal of Psychotherapy, 26, 501-510.

HORROCKS, J.E. & JACKSON, D.W. (1972) Self and Role : A Theory of Self-Process and Role Behavior. Boston: Houghton Mifflin.

INNES, J.M. (1983) Pathways to Good Programme Evaluation and its Limitations. Paper presented to Seminar on Research and Evaluation in Rehabilitation of the Young Disabled, Regency Park Centre for the Young Disabled, Adelaide, South Australia.

IRWIN, E. & WILLIAMS, B. (1973) Parents working with parents : the cleft palate program. Cleft Palate Journal, 10, 360-366.

JAMES, W. (1893) Psychology. New York: Henry Holt & Co.

KAHN, M. (1951) A comparative investigation of the responses to frustration of normal hearing and hypacousic children. Ann Arbor University, Microfilms Publication No. 2766. Brief summary appears in Microfilm Abstracts, 11, 959-960.

KAHN, M.M. & RUDESTAM, K.E. (1971) The relationship between liking and perceived self disclosure in small groups. Journal of Psychology, 78, 81-85.

KALFAS, N.S. (1974) Client perceived therapist empathy as a correlate of outcome. Dissertation Abstracts International, 34, 5633A.

KAMMERER, R.C. (1940) An exploratory psychological study of crippled children. Psychological Record, 4, 47-100.

KELLEY, H. & PEPITONE, A. (1952) An evaluation of a college course in human relations. Journal of Educational Psychology, 43, 193-209.

KINCH, J.W. (1963) A formalised theory of self concept. American Journal of Sociology, 68, 481-486.

KURTZ, R.R. & GRUMMON, D.L. (1972) Different approaches to the measurement of therapist empathy and their relationship as therapy outcome. Journal of Consulting and Clinical Psychology, 39, 106-115.

LANDIS, C. & BOLLES, M.M. (1942) Personality and Sexuality of the Physically Handicapped Woman. New York: London: Paul B. Mocber.

LANGE, P. (1959) Frustrative reactions of physically handicapped children. Exceptional Children, 25, 355-357.

LASKY, R.G., DELL ORTO, A.E., & MARINELLI, R.P. (1977) Structured experiential therapy : A group approach to rehabilitation. In R.P. Marinelli & A.E. Dell Orto (Eds.), The Psychological and Social Impact of Physical Disability. New York: Springer Publishing Co.

LESSER, W.M. (1961) The relationship between counseling progress and empathetic understanding. Journal of Counseling Psychology, 8, 330-336.

LIEBERMAN, M.A., YALOM, I.D. & MILES, M.B. (1973) Encounter Groups : First Facts. New York: Basic Books.

LINDNER, R. (1970) Mothers of disabled children - the value of weekly group meetings. Developmental Medicine and Child Neurology, 12, 202-206.

LINKOWSKI, D.C. & DUNN, M.A. (1974) Self-concept and acceptance of disability. Vol. 18, No. 1, 28-34.

LO CASCIO, R. (1964) Delayed and impaired development : A neglected aspect of vocational development theory. Person. Guidance Journal, 42, 885-887.

LORR, M. (1965) Client perceptions of therapists : A study of the therapeutic relation. Journal of Consulting Psychology, 81, 344-354.

LYNCH, D.J. & ARNDT, C. (1973) Developmental changes in response to frustration among physically handicapped children. Journal of Personality Assessment, 37, 130-135.

McCLANAHAN, L.D. (1974) Comparison of counseling techniques and attributes with client evaluation of the counseling relationship. Dissertation Abstracts International, 34, 5637A.

McCLELLAN, M.S. (1972) Crisis groups in special care areas. Nursing Clinics of North America, 7, 363-371.

McCONNELL, T. (1974) Group Leadership for Self Regulation. New York: Petrocelli Books.

McDANIEL, J. (1969) Physical Disability and Human Behavior. Pergamon Press.

MacGREGOR, F.C., ABEL, T.M., BRYT, A., LAVER, E. & WEISSMAN, S. (1953) Facial Deformities and Plastic Surgery. Springfield, Ill.: Thomas.

McNALLY, H.A. (1973) An investigation of selected counsellor and client characteristics as possible predictors of counselling effectiveness. Journal of Clinical Psychology, 20, 258-264.

McWILLIAMS, B.J. & MUSGRAVE, R.M. (1972) Psychological implications of articulation disorders in cleft palate children. Cleft Palate Journal, 9, 294-303.

MALKIDES, G. (1958) An investigation of therapeutic success as a function of four variables. Unpublished Doctoral Dissertation, University of Chicago.

MANLEY, S.A. (1973) A definitive approach to groups. Journal of Rehabilitation, 39, 38.

MARTIN, P.J. & STERNE, A.L. (1976a) Post hospital adjustment as related to therapists' in-therapy behaviours. Psychotherapy, Theory, Research and Practice, 13, 267-273.

MARTIN, P.J. & STERNE, A.L. (1976b) Subjective objectivity : therapists' affection and successful psychotherapy. Psychological Reports, 38, 1163-1169.

MATSON, A. (1972) Long term physical illness in childhood. Pediatrics, 50, 801-811.

MEIGHAN, T. (1970) An investigation of the self concept of blind and partially seeing adolescents and of the relation of their self concepts to academic achievement in language and paragraph reading. Unpublished Doctoral Dissertation, Catholic University, Washington, D.C.

MENG, H. (1938) Zur Sozial psychologie der Körperbeschädigter: Ein Beitrag sum problem der praktischan psychohygiene. Schweizer Archiv fur Neurologie und Psychiatrie, 40, 328-344. (Reported in Barker et al., 1953).

MILLER, E.A. (1958) Cerebral palsied children and their parents. Exceptional Child, 24, 298-302, 305.

MILLER, D., WOLFE, M. & SPIGEL, M. (1975) Therapeutic groups for patients with spinal cord injuries. Archives Phys. Med. Rehabilitation, 56, 130-135.

MINTZ, J., LUBORSKY, L. & AVERBACH, A. (1971) Dimeshions of psychotherapy : A factor analytic study of ratings of psychotherapy sessions. Journal of Consulting and Clinical Psychology, 36, 106-210.

MITCHELL, K., BOZARTH, J., TRUAX, C. & KRAFT, C. (1973) Antecedents for psychotherapeutic outcome. Arkansas Rehabilitation Research and Training Center, University of Arkansas (NIMH Final Report, MH 12306).

MITCHELL, K.M., BOZARTH, J.D. & KRAFT, C.C. (1977) A reappraisal of the therapeutic effectiveness of accurate empathy, nonpossessive warmth, and genuineness. In A.S. Gurman & A.M. Kazin (Eds.), Effective Psychotherapy : A Handbook of Research. New York: Pergamon. pp. 482-502.

MONEY, J. & POLLITT, E. (1968) Studies on the psychology of dwarfism II. Journal of Pediatrics, 64, 381-390.

MULLER, J. & ABELES, N. (1971) Relationship of lking, empathy and therapists experience to outcome of therapy. Journal of Counseling Psychology, 18, 39-43.

ORADEI, D. & WAITE, N. (1974) Group psychotherapy with stroke patients during the immediate recovery phase. American Journal of Orthopsychiatry, 44, 386-395.

ORLINSKY, D.E. & HOWARD, K.I. (1978) The relation of process to outcome in psychotherapy. In S.L. Garfield & A.E. Bergin (Eds.), Handbook of Psychotherapy and Behaviour Change (Second Edition). New York: Wiley.

OSIPOW, S.H. (1973) Theories of Career Development (Second Edition). Englewood Cliffs, N.J.: Prentice-Hall.

OSTRING, H. & NIEMINEN, S. (1982) Concept of self and the attitude of school age C.P. children towards their handicap. International Journal of Rehabilitation Research, 5 (2), 235-237.

PALMER, J.M. & ADAMS, M.R. (1962) The oral image of children with cleft lip and palate. Cleft Palate Bulletin, 12(4), 72-76.

PARSONS, T. (1951) The Social System. Glencoe, Illinois: The Free Press.

PARSONS. T. (1958) Definitions of health and illness in the light of American values and social structures. In E.G. Jaco (Ed.), Patients, Physicians and Illness. Glencoe, Illinois: The Free Press.

PARLOFF, M.B., WASKOW, I.E. & WOLFE, B.E. (1978) Research and therapist variables in relation to process and outcome. In S.L. Garfield & A.E. Bergin (Eds.), Handbook of Psychotherapy and Behavior Change (Second Edition). New York: Wiley, pp. 223-282.

PILLEMAN, D.D. & LIGHT, R.J. (1979) Using the results of randomised experiments to construct social programs : Three caveats. In L. Sechrest et al. (Eds.), Evaluation Studies Review Annual, Vol. 4. London: Sage, pp. 717-726.

POLLITT, E. & MONEY, J. (1964) Studies of the psychology of dwarfism I. Journal of Pediatrics, 64, 415-421.

PRUGH, D.G. (1956) Psychological and psychophysiological aspects of oral activities in childhood. Pediat. Clinic. N. Am., 3, 1049-1072.

REDINGER, R.A., FORSTER, S. & DOLPHIN, M.K. (1971) Group therapy in the rehabilitation of the severely aphasic and hemiplegic in the late stages. Scandinavian Journal of Rehabilitation Medicine, 3, 89-91.

RHODES, R. & DUDLEY, D. (1971) Response to group treatment in patients with severe chronic lung disease. International Journal of Group Psychotherapy, 21, 214-225.

RICHMAN, L. & HARPER, D. (1978) School adjustment of children with observable disabilities. Journal of Abnormal Psychology, Vol. 6, No. 1, 11-18.

ROE, A. (1957) Early determinants of vocational choice. Journal of Counseling Psychology, 4, 212-217.

ROGERS, C.R. (1957) The necessary and sufficient conditions of thereapeutic personality change. Journal of Consulting Psychology, 22, 95-103.

ROSENBERG, B. (1956) Group vocational counselling in a rehabilitation center. Journal of Rehabilitation, 12, 4-6.

ROTNEM, D., GENEL, M., HINTZ, R., & COHEN, D.J. (1973) Personality development in children with growth hormone deficiency. Journal of Child Psychiatry, Vol. 16, No. 3, 412-426.

RUTTER, M. (1977) Brain damage syndromes in childhood : Concepts and findings. Journal of Child Psychology and Psychiatry, Vol. 18, 1-21.

RUTTER, M., GRAHAM, P. & YOLE, W. (1970a) A neuropsychiatric study in childhood. Clinics in Develop. Med., Nos. 35/36 SIMP/Heineman, London.

RUTTER, M., TIZARD, J. & WHITMORE K. (Eds.) (1970b) Education, Health and Behaviour. London: Longman.

SAFILIOS-ROTHSCHILD (1970) The Sociology and Social Psychology of Disability and Rehabilitation. New York: Random House.

SALTZMAN, C., LUETGERT, M.J., ROTH, C.H., CREASER, J. & HOWARD, L. (1976) Formation of a therapeutic relationship : experiences during the initial phase of psychotherapy as predictors of treatment duration and outcome. Journal of Consulting and Clinical Psychology, 44, 546-555.

SAMUELS, S.C. (1977) Enhancing Self-Concept in Early Childhood. Theory and Practice. Human Sciences Press.

SAPOLSKY, A. (1965) Relationship between patient-doctor compatibility, mutual perception and outcome of treatment. Journal of Abnormal Psychology, 70, 70-76.

SARBIN, T.R. (1952) A preface to psychological analysis of the self. Psychological Review, 59, 11-22.

SCHWARTZ, m. 7 cahill, r. (1971) Psychopathology associated with myasthema gravis and its treatment by psychotherapeutically oriented group counselling. Journal of Chronic Disability, 24, 543-552.

SEARS, R.R. (1970) Relations of early socialization experience to self-concepts and gender role in middle childhood. Child Development, 41, 267-289.

SECHREST, L., WEST, S.G., PHILLIPS, M.A., REDNER, R. & YEATON, W. (1979) Some neglected problems in evaluation research : Strength and integrity of treatments. In L. Sechrest et al. (Eds.), Evaluation Studies Review Annual, Vol. 4. Beverley Hills, Ca.: Sage. pp. 15-35.

SEIDEL, O.P., CHADWICK, O.F.D., & RUTTER, M. (1975) Psychological disorders in crippled children. A comparative study of children with and without brain damage. Developmental Medicine and Child Neurology, 17, 563-573.

SEIDENFELD, M.A. (1948a) The psychological sequelae of poliomyelitis in children. Nerv. Child, 7, 14-28.

SEIFERT, K.H. (1980) The level and the development of vocational maturity of physically disabled students in grades 7 through 9. International Journal of Rehabilitation Research, 3 (1), 69-71.

SELIGMAN, M. (Ed.) (1977) Group Counselling and Group Psychotherapy with Rehabilitation Clients. Charles C. Thomas.

SHERE, M.O. (1954) An evaluation of the social and emotional development of the cerebral palsied twin. Unpublished Doctoral Dissertation, University of Illinois. Ann Arbor : University Microfilms, Publication No. 9140.

SHONTZ, F.C. (1970) Psychological aspects of diability. 17 (2), 57-69.

SIDNEY, R.A. (1951) An evaluation of the social adjustment of a group of children born with cleft palates. Doctoral Dissertation, University of Pittsburgh, Pennsylvania.

SLOANE, R.B., STAPLES, F.R., CRISTOL, A.M., YORKSTON, N.J. & WHIPPLE, K. (1975) Psychotherapy vs. Behaviour Therapy. Cambridge: Harvard University Press.

SMITH, P. (1960) A factor analytic study of the self-concept. Journal of Consulting Psychology, 24, 191.

SMOCK, C. & CRUICKSHANK, W.M. (1952) Responses of handicapped and normal children to the Rosenzweig P-F Study. The Quarterly Journal of Child Behaviour, IV, 156-164.

SNIZEK, W.E. (1975) The relationship between theory and research. A study in the sociology of sociology. The Sociological Quarterly, 16 (3), 415-428.

SNIZEK, W.E. (1976) An empirical assessment of 'sociology'. A multiple paradigm science. The American Sociologist, 11 (4), 217-219.

SNIZEK, W.E. (1979) The relationship between theory and research. A longitudinal perspective. The Sociological Quarterly, 20 (1), 147-154.

SNIZEK, W.E. & FUHRRMAN, E.R. (1980) Theoretical observation and applied behavioural science. The role of theory in applied behavioural science research. Journal of Applied Behavioural Science, Vol. 16, 93-103.

SOMMERS, V.S. (1977) The Influence of Parental Attitudes and Social Environment on the Personality of the Adolescent Blind. New York: American Foundation for the Blind.

SPRINGER, N.N. (1938) A comparative study of psychoneurotic responses of deaf and hearing children. Journal of Educational Psychology, 29, 459-466.

STARR, P. & HEISERMAN, K. (1977) Acceptance of disability by teenagers with oral-facial clefts. Rehabilitation Counselling Bulletin, Vol. 20, No. 3, 198-202.

STRUPP, H.M., WALLACH, M.L. & WOGAN, M. (1964) The psychotherapy experience in retrospect : A questionnaire survey of former patients and their therapists. Psychological Monographs, 78, Whole No. 11.

SUPER, D.E. (1953) A theory of vocational development. American Psychologist, 8, 185-190.

SUPER, D.E. & OVERSTREET, P.L. (1960) The Vocational Maturity of Ninth Grade Boys. New York: Teachers College Bureau of Publications.

TEMPLE, R. & AMEN, E.W. (1944) A study of anxiety in children by means of a projective technique. Genetic Psychol. Monographs, 30, 59-114.

TEPLIN, W., HOWARD, J.A. & O'CONNOR, M.J. (1981) Self concept of young children with cerebral palsy. Developmental Medicine and Child Neurology, 23, 730-738.

TISZA, V.B., SELVERSTONE, B., ROSENBLUM, G. & HANLON, S. (1958) Psychiatric observations of children with cleft palate. American Journal of Orthopsychiatry, 416-423.

TOVIAN, S.M. (1977) Patient experiences and psychotherapy outcome. Unpublished Doctoral Dissertation, Northwestern University.

TRACHT, V.A. (1946) A comparative stidy of personality factors among cerebral palsied and non-handicapped persons. Masters Thesis, University of Chicago.

TROWBRIDGE, N.T. & TROWBRIDGE, L. (1972) Self concept and socio-economic status. Child Study Journal, 2, 123-143.

TRUAX, C.B. (1963) Effective ingredients in psychotherapy. An approach to unraveling the patient-therapist interaction. Journal of Counseling Psychology, 10, 256-263.

TRUAX, C.B. & CARKHUFF, R.R. (1963) For better or for worse : The process of psychotherapeutic personality change. Paper read at Academic Assembly of Clinical Psychology, McGill University, Montreal, Canada.

TRUAX, C.B., CARKHUFF, R.R. & KODMAN, F. (1965) Relationships between therapist-offered conditions and patient change in group psychotherapy. Journal of Clinical Psychology, 21, 327-329.

TRUAX, C.B., WARGO, D.G. & SILBER, L. (1966) Effects of high accurate empathy and non-possessive warmth during group psychotherapy upon female institutionalised delinquents. Journal of Abnormal Psychology, 71, 267-274.

TRUAX, C.B. & WARGO, D.G. (1967a) Antecedents to outcome in group psychotherapy with juvenile delinquests : Effects of therapeutic conditions, alternate sessions, vicarious therapy pre-training and client self-exploration. Unpublished manuscript, Arkansas Rehabilitative Research and Training Center, University of Arkansas.

TRUAX, C.B. & WARGO, D.G. (1967b) Antecedents to outcome in group psychotherapy with hospitalized mental patients : Effects of therapeutic conditions, alternate sessions, vicarious therapy pre-training and patient self-exploration. Unpublished manuscript, Arkansas Rehabilitative Research and Training Center, University of Arkansas.

TRUAX, C.B. (1968c) Therapist interpersonal reinforcement of client self exploration and therapeutic outcome in group psychotherapy. Journal of Counseling Psychology, 15, 225-231.

TRUAX, C.B. & WARGO, D.G. (1969) Antecedents to outcome in group psychotherapy with outpatients : Effects of therapeutic conditions, alternate sessions, vicarious therapy pre-training and patient self exploration. Journal of Consulting and Clinical Psychology, 33.

TRUAX, C.B., WARGO, D.G., FRANK, J.D., IMBER, S.D., BATTLE, C.C. HOEHN-SARIC, R., NASH, E.H. & STONE, A.R. (1966) Therapists contribution to accurate empathy and non-possessive warmth in psychotherapy. Journal of Clinical Psychology, 22, 331-334.

TRUAX, C.B. & MITCHELL, K.M. (1971) Research on certain therapist interpersonal skills in relation to process and outcome. In A. Bergin & S. Garfield (Eds.), Handbook of Psychotherapy and Behaviour Change. Wiley & Sons Inc.

WATSON, C. (1964) Personalt adjustment in boys with cleft lip and palate. Cleft Palate Journal, 14, 130-138.

WEIGEL, R.G., DIRGES, N., DYER, R. & STRAUMFJOREL, A.A. (1972) Perceived self disclosure, mental health and who is liked in group treatment. Journal of Counselling Psychology, 19, 47-52.

WENAR, C. (1953) The effects of a motor handicap on personality : the effects on level of aspiration. Child Development, 24, 123-130.

WHITEHORN, J.C. (1964) Human factors in psychiatry. Bulletin of New York Acadamey of Medicine, 40, 451-466.

WHITEHORN, J.C. & BETZ, B. (1954) A study of psychotherapeutic relationships between physicians and schizophrenic patients. American Journal of Psychiatry, 3, 321-331.

WILLIAMS, R.L. & COLE, S. (1968) Self-concept and school adjustment. The Personnel and Guidance Journal, 46, 478-481.

WILSON, A. (1971) Group therapy for parents of handicapped children. Rehabilitation Literature, 32, 332-335.

WILSON, E.L. (1962) Group therapy experiences with eight physically disabled homebound students in a prevocational project. Exceptional Children, 29, 164-169.

WRIGHT, B.A. (1960) Physical Disability : A Psychological Approach. Harper and Row.

WRIGHT, B.A. (1969) Some psychological aspects of disability. In D. Malikin & M. Rusalen (Eds.), Vocational Rehabilitation of the Disabled : An Overview. New York: University Press, pp. 91-103.

WRIGHT, B.A. (1977) Changes in attitudes towards people with handicaps. In R. Marinelli & A. Dell Orto (Eds.), The Psychological and Social Impact of Physical Disability. Springer Publishing Co., pp. 259-266.

YALOM, I.D., PETERS, H.S., SHELDON, M.Z. & RAND, K.H. (1967) Prediction of success in group therapy. Archives of General Psychiatry, 17, 159-168.

YIN, R.K. (1984) Case Study Research Design and Methods. Sage Publications Inc.

ZIMMERMAN, I.L. & ALLEBRAND, G.N. (1965) Personality characteristics and attitudes toward achievement of good and poor readers. Journal of Educational Research, 59, 28-30.

APPENDIX

Response to Examiners' Comments

A number of points were raised by the external examiners of this thesis. The following addresses the major issues raised.

With respect to the statement labelled (a) on page eleven of the thesis, it was commented that the apparent bias in the direction of the outcome of research into the maladjustment of the disabled may be overcome by framing the null hypothesis correctly and observing requirements to "reject" or "fail to reject". The point to be made here is that there is an alternative view expressed by what is now a considerable literature, and one which spans a broad range of psychological research. This view is that there are problems inherent in the framing of the conditions and the underlying assumptions for the testing of psychological hypotheses. The failure to take account of the particular conditions which exist at particular times in different samples, and for different investigations, leads to a belief that a given result may have an historical and trans-situational import. The analysis of the "contextualist" nature of psychological research at least suggests that such expectations rarely prevail (e.g. Blair and Hunt, 1986; Georgoudi and Rosnow, 1985; Greenwald et al, 1986; Heshka, 1986; McGuire, 1983; Thorngate, 1976).

It is important to consider the results of the present studty within the social and political context within which it occurred. One of the strengths of the case study method is that it requires the investigator and the critic to address the very specific context in which the investigation occurred (Campbell, 1975), and in so doing, make sense of the particular before moving to the general. With respect to this thesis, the present investigation was considered a case study with a group of six people, not as case studies of individual people. The group of people was the case. The individuals could be conceived as having been affected by the processes of that particular group experience; to break

down that group into the individuals, as separable components, would be to lose the specific context of the setting and thereby lose the power of the case study method to contribute to knowledge.

Second, an examiner asked, with respect to the outcome for the control group's lower self-concept means over time (p. 119), why should this be so? I was trying at this point to account for the tests which showed no change in the scores for the disabled group, but nevertheless a statistically significant difference between that group and the control group. We have insufficient data about the context of the control group to be able to make any real judgement about what happened there; therefore to hypothesise about reasons for any downward change would be premature. There could be some slight effects of regression to a mean for the control group, which would have occurred in the disabled group but which were prevented by the intervention. Cook and Campbell (1979) consider many plausible alternative outcomes which can be expected in such quasi-experimental, pre-test, post-test non-equivalent control group designs such as the design used in this study. Without additional information to provide developmental trend lines before and after the intervention, it is impossible properly to make a judgement. The reader may examine Reynolds and West (1987) as an example of the ways in which such a design may be improved, with strong resources not available in this study.

Finally, an examiner asks why correlations should increase with practice (p. 119). The reason could be as follows. With a test designed to measure the concept that a person holds of him or her self, where the sub-tests are not independent to begin with, the introspection demanded by the exercise of completing the test may produce a movement towards greater "consistency". This means that a higher inter-correlation between the sub-scales would occur. This will not always be the case, naturally, as the structure of the initial matrix will have a determining effect.

Additional References to those Cited in the Original Text

Blair, J.D., and Hunt, J.G. (1986). Getting inside the head of the management researcher one more time: Context-free and context-specific orientations in research. Yearly Review of Management, 12, 147-166.

Campbell, D.T. (1975). Degrees of freedom and the case study. Comparative Political Studies, 8, 178-193.

Cook, T.D., and Campbell, D.T. (1979). Quasi-experimentation. Chicago. Rand-McNally.

Georgoudi, M., and Rosnow, R.L. (1985). Notes toward a contextualist understanding of social psychology. Personality and Social Psychology Bulletin, 11, 5-22.

Greenwald, A.G., Pratkanis, A.R., Leippe, M.R., and Baumgardner, M.H. (1980). Under what conditions does theory obstruct research progress? Psychological Review, 93, 26-229.

Heshka, S. (1986). Counter examples, boundary conditions and research strategy in social psychology. In K.S. Larsen (Ed.). Dialectics and Ideology in Psychology. Norwood, N.J. : Ablex.

McGuire, W.J. (1983). A contextualist theory of knowledge: Its implications for innovation and reform in psychological research. Advances in Experimental Social Psychology, 16, 1-47.

Reynolds, K.D., and West, S.G. (1987). A multiplist strategy for strengthening nonequivalent control group designs. Evaluation Review, 11, 691-714.

Thorngate, W. (1976). "In general" versus "It depends": Some comments of the Gergen-Schlenker debate. Personality and Social Psychology Bulletin, 2, 404-410.