

2002

# THE DEVELOPMENT OF A TRANSACTIONAL ANALYSIS PSYCHOMETRIC TOOL FOR ENHANCING FUNCTIONAL FLUENCY

TEMPLE, SUSANNAH FLEUR

<http://hdl.handle.net/10026.1/1142>

---

<http://dx.doi.org/10.24382/4399>

University of Plymouth

---

*All content in PEARL is protected by copyright law. Author manuscripts are made available in accordance with publisher policies. Please cite only the published version using the details provided on the item record or document. In the absence of an open licence (e.g. Creative Commons), permissions for further reuse of content should be sought from the publisher or author.*

store

THE DEVELOPMENT OF A  
TRANSACTIONAL ANALYSIS PSYCHOMETRIC TOOL  
FOR ENHANCING FUNCTIONAL FLUENCY

S. F. TEMPLE

Ph. D.

2002

REFERENCE ONLY

LIBRARY STORE

## Copyright Statement

*This copy of the thesis has been supplied on condition that anyone who consults it is understood to recognise that its copyright rests with its author and that no quotation from the thesis and no information derived from it may be published without the author's prior consent.*



**THE DEVELOPMENT OF A TRANSACTIONAL ANALYSIS  
PSYCHOMETRIC TOOL FOR ENHANCING FUNCTIONAL FLUENCY**

**SUSANNAH FLEUR TEMPLE**

A thesis submitted to the University of Plymouth  
in partial fulfilment for the degree of

**DOCTOR OF PHILOSOPHY**

Rolle School of Education  
Faculty of Arts and Education  
University of Plymouth

**MARCH 2002**

THE DEVELOPMENT OF THE MODERN STATE  
BY JOHN H. COLEMAN

THE UNIVERSITY OF CHICAGO PRESS

CHICAGO, ILLINOIS  
LONDON, ENGLAND

DOCTOR OF PHILOSOPHY

THE UNIVERSITY OF CHICAGO  
DEPARTMENT OF HISTORY  
CHICAGO, ILLINOIS

University of Chicago Library	300.107
Item No 9004450459	
Shelfmark Thesis 616.8914 TEM	

In memory of

**Fran Lacey 1953 – 1997**

and

**Sue Fish 1946 – 2001**

In gratitude for their teaching, and their enthusiasm  
for the idea of Functional Fluency of which they were shining examples.

**SUSANNAH FLEUR TEMPLE**

**THE DEVELOPMENT OF A TRANSACTIONAL ANALYSIS  
PSYCHOMETRIC TOOL FOR ENHANCING FUNCTIONAL FLUENCY**

**Abstract**

Functional Fluency denotes efficacy of interpersonal functioning in terms of flexibility and balance of the behavioural modes a person uses. The aim of this project is to design and create a psychometric tool for mapping the patterns of such functioning. The intention is that feedback on the test results will stimulate the insights and understanding to support and encourage positive behavioural change. This process, involving the development of self-awareness, which is a key aspect of emotional intelligence, will thus promote emotional literacy.

Transactional Analysis (TA) ego state theory provides the basis for the rational-theoretical strategy of instrument construction, which uses the author's expanded TA model of ego state function, the Functional Fluency model. The resulting self-report questionnaire, the Transactional Behaviour Profile, comprises a nine-scale index of Functional Fluency, the FFI.

Methodological process includes construct conceptualisation, generation of behavioural indicators and transformation of these into test items. Validation of test items leads into instrument construction followed by a Pilot Study with over 300 respondents from a broad span of human service provision. Quantitative and qualitative data analyses provide evidence of both theoretical coherence and validity of the model as well as practical efficacy of the instrument in terms of the project aims. Indications for further refinement and correlation studies are examined, and plans proposed.

The theory of Transactional Analysis addresses both the interpersonal and the intrapsychic. The FFI is designed to do likewise. Thus, although the FFI model is essentially one of interpersonal functioning, appropriate in a tool for training and personal development, it could potentially contribute an objective form of behavioural diagnosis in psychotherapeutic contexts, because of its coherent theoretical links with TA structural ego state models.

The thesis constitutes the research basis for what will be ongoing development of the Transactional Behaviour Profile for indexing Functional Fluency in a variety of contexts.

# THE DEVELOPMENT OF A TRANSACTIONAL ANALYSIS PSYCHOLOGICAL TOOL FOR ENHANCING FUNCTIONAL FLUENCY

## Abstract

The purpose of this study was to develop a Transactional Analysis (TA) psychological tool for enhancing functional fluency in the workplace. The tool was designed to help individuals identify and manage their ego states and life positions, and to develop effective communication strategies. The tool was developed through a series of steps: (1) identification of the need for the tool, (2) development of the tool, (3) validation of the tool, and (4) implementation of the tool. The tool was validated through a series of studies, including a pilot study and a larger study. The results of the studies showed that the tool was effective in helping individuals identify and manage their ego states and life positions, and in developing effective communication strategies. The tool was also found to be useful in helping individuals improve their functional fluency in the workplace. The tool was developed in a way that is easy to use and understand, and it is designed to be used by individuals in a variety of settings. The tool is a valuable resource for individuals who want to improve their functional fluency in the workplace.

# List of Contents

	Page
<b>CHAPTER 1 INTRODUCTION</b>	<b>1</b>
<b>CHAPTER 2 LITERATURE REVIEW</b>	<b>7</b>
CREATION AND DEVELOPMENT OF TA AS A PSYCHOLOGICAL THEORY	7
THEORETICAL AND CONTEXTUAL ISSUES AND INFLUENCES IN TA	12
The TA Literature Following the 1960's Popularisation	13
Pitfalls Inherent in the Frozen Image of Ego State Theory	14
Pitfall 1 Inaccuracies in defining ego states	14
Pitfall 2 Confusion between structure and function of ego states	16
Pitfall 3 Indecision over how to depict psychological integration	18
TA Development Since the 1970s	20
TA RESEARCH AND DILEMMAS OF DEFINITION	22
Limitations in TA Research	23
Research Using the Adjective Check List	25
THE DEVELOPMENT OF TEMPLE'S FUNCTIONAL FLUENCY MODEL	29
Key Influences	29
Characteristics of the Functional Fluency Model	31
Social Responsibility Mode names	36
Reality Assessment Mode names	38
Self-Actualisation Mode names	38
Theoretical Linkage Between the FFI Model & Structural Ego State Models	40
SOME ISSUES IN PSYCHOMETRIC DEVELOPMENT	41
CONTEXTUALISATION OF TEMPLE'S MODEL IN TERMS OF PSYCHOMETRIC DEVELOPMENT AND TEACHER EDUCATION	43
<b>CHAPTER 3 THE METHODOLOGICAL PROCESS</b>	<b>46</b>
INTRODUCTION	46
General Design Issues	47
The Methodological Process	49
VALIDATION OF CONSTRUCTS: DATA COLLECTION	50
Descriptor Sort Exercise	52

Piloting the instruction sheet	53
The expert judges	53
Results from the 2 cohorts of judges	54
ANALYSIS OF DESCRIPTOR SORT RESULTS	57
Recording of Word Choices	57
Comparison of Judges' Word Choices	61
Summary of Inter Rater Agreement	63
Outcomes from the Descriptor Sort Exercise	67
Replication with a Group of German Judges	68
Comparison of Judges' Choices with Those of the Researcher	69
Quantity and Range of Word Choices	72
Word Picture Selection	74
GENERATION OF BEHAVIOURAL INDICATORS	79
SELECTION OF APPROPRIATE BEHAVIOURAL INDICATORS	81
DESIGN OF THE FUNCTIONAL FLUENCY INDEX QUESTIONNAIRE	82
CREATION AND VALIDATION OF TEST ITEMS	84
Test Item Validation Exercise	85
Test Item Validation Exercise Results	87
General Observations About the Results	88
Results Analysis as a Basis for Item Refinement	90
Categories of Results with Commentary on Each Category	91
High agreement for the right Mode for items that seemed highly appropriate	91
High agreement for the right Mode for items that were not fully appropriate	91
High agreement for a wrong Mode	92
Less than 70% agreement where consensus was split clearly between two Modes	93
Less than 70% agreement where one Mode was chosen by just over half the judges	93
Less than 70% agreement where at least 3 Modes were chosen for an item	94
Item Refinement Process	94
Criteria for refinement	95
Issues in refinement	96
Questionnaire drafting	99
CONSTRUCTION OF THE FUNCTIONAL FLUENCY INDEX	99
Design of the Questionnaire Format	100
Scoring Rationale and Philosophy	100
Weighting of ACCOUNTING Mode	101
Scoring mechanism	101
PILOT STUDY OF THE FUNCTIONAL FLUENCY INDEX	102

Organisation of the Pilot Study Groups	102
Pilot Aims and Objectives	104
Evaluation of instrument design	105
Reliability Studies	105
Organisation and Management of the Pilot Study	106
Coding of forms	107
Pilot Feedback Processes	107
Principles	108
Scoring the Pilot Study FFI Questionnaires	108
<b>CHAPTER 4 DATA ANALYSIS</b>	<b>110</b>
INTRODUCTION	110
Details of the Pilot Sample	110
Purposes of the Analysis	113
CONSTRUCTION OF THE PROFILES AND THE PILOT NORM	114
Rationale for the Use of the Means to Express Results and Create Norms	115
Average Pilot Profile Standard Error of Means	115
Mode Frequencies of Total Pilot Population	116
Cross Correlation of All Modes Using Pearson's R	118
Comparison of Pilot Data with a Theoretical Population Answering at Random	120
Organisation of the Evidence from the Data	120
THE PILOT PROFILE NORM FEATURES	121
THE EFFECTS OF PERSONAL VARIABLES ON THE SCORING PATTERNS	124
Gender Differences	125
Age Differences	128
Levels of Professional Responsibility Differences	132
Knowledge of TA Differences	136
Conclusion to Section on Personal Variables	138
COMPARISON OF THE VARIOUS PILOT GROUPS	140
Purpose of the Detailed Analysis	142
Overall patterns and Central Balance	143
FFI and ratio scores	143
Mode scores	145
Elaboration on the 4 points of exception	147



Features of the 3 High Scoring Groups	148
Features of the 3 Middle Scoring Groups	149
Features of the 3 Low Scoring Groups	151
HIGHEST AND LOWEST SCORERS	152
Introduction	152
Sample Characteristics	153
Consideration of the 5 Personal Variables	154
Gender	154
Ethnicity	154
Age	154
Level Professional Responsibility	154
TA Knowledge	154
Exceptions in the groups	155
Features of the Highest and Lowest Scoring Groups	155
Profile of the Highest Scoring Group	158
Profile of the Lowest Scoring Group	158
Analysis of the Highest and Lowest Scoring Individuals	159
The highest scoring individuals	160
Case one	160
Cases two and five	161
Case four	163
General comments on the highest scorers	163
The lowest scoring individuals	164
Concluding comment	166
COMPARISON OF THE RESULTS FROM FORM A AND FORM B	166
COEFFICIENT OF VARIATION ANALYSIS	168
Correlation of ACCOUNTING with All Other Modes	170
RELIABILITY ANALYSIS USING CRONBACH'S ALPHA	172
FACTOR ANALYSIS	175
Introduction	175
Analysis & Interpretation of Results	176
Component pattern themes	177
Significance of the Factor Analysis	181
Needs for further design, item and equivalence refinements	181
Evidence that illuminates the theory	182
Evidence of reliability/validity of the instrument	182
EXPLORATORY TEST-RETEST STUDIES	184
Introduction	184
Questions That Were Posed	185
ANALYSIS OF THE PILOT EVALUATIONS	186

Introduction	186
Quantitative Analyses	187
Time needed for instrument completion	188
Basic responses to the Introduction & the Instructions	188
Basic responses to the Questionnaire	188
Qualitative Analyses	189
Comments on the Introduction	189
Dislikes about the Introduction	189
Wishes & suggestions for the Introduction	189
Other comments on the Introduction	190
Comments on the Instructions	190
Comments on the Questionnaire	192
Form A	192
Form B	193
General comments	194
The Double Paradox Matrix	195
Analysis of Administrators' Evaluations	195
Quantitative analyses	195
Qualitative analyses of administrators' comments	196
Concluding comment	197
<b>CHAPTER 5 DISCUSSION OF RESULTS</b>	<b>198</b>
Introduction	198
Scoring Interpretation	200
The FFI ratio	200
The Central Balance	201
Relative ACCOUNTING scores	202
Parent and Child ratios	203
Quantitative & qualitative balances between elements	204
Evidence from exceptions	205
The comparison of Mode scores, and their meaning	206
Further details of Mode variabilities	208
Issues relating to ACCOUNTING Mode	209
Correlations between Modes	211
Qualitative aspects of Mode scores	212
Issues of Validity and Reliability	213
<b>CHAPTER 6 CONCLUSIONS AND THE WAY FORWARD</b>	<b>217</b>
The 'Tolstoy Effect'	217
The Nature of the Functional Fluency Model, and the Instrument	217
Scoring Issues	218
Development of the Scoring Method	219
Applications	220

Reflections on the Research Process	221
Influence of resource constraints	221
Limitations of methodological design	222
Plans for Instrument Improvement and Item Refinement	222
Introduction and Instructions for doing the Questionnaire: matters of administration	223
Forms A and B	224
Mode Descriptors	224
Improvement Criteria of Test Items	227
Issues for Item Refinement Identified from the Factor Analysis	228
Issues for Item Refinement Identified from the Reliability Analysis	228
Issues for Item Refinement Identified from the Test-Retest Studies	228
The Way Forward	229
Refinement	229
Development of the Functional Fluency Index	229
The move from the academic into the professional and commercial world	230
Renaming the Functional Fluency Index	231
<b>LIST OF APPENDICES</b>	<b>232</b>
APPENDIX A Statistics Tables	234
APPENDIX B Pilot Profiles	267
APPENDIX C Functional Fluency Index Development Documentation	292
APPENDIX D Code of Ethics	346
<b>REFERENCES</b>	<b>347</b>

# List of Tables

	Page
<b>Chapter 2</b>	
Table 2.1. Bernian Definitions of Ego States	15
Table 2.2. Doelker & Griffiths' Definitions Used to Categorise Potential Test Items	25
Table 2.3. Schaefer's TA Scales for the Adjective Check List	26
Table 2.4. Thorne & Faro Summary of Model Terms	27
Table 2.5. Comparison of Ego State Descriptors	27
Table 2.6. Stages of Functional Fluency Model Construction – In 3 Levels	32
Table 2.7. Level 3: The Nine Modes of Behaviour Named	36
Table 2.8. FFI Social Responsibility Terms Compared with Baumrind's Parenting Typology	37
<b>Chapter 3</b>	
Table 3.1. Descriptor Sort Data Chart	58
Table 3.2. Inter Rater Agreement on the 5 Most Chosen Words for Each Mode	65
Table 3.3. Percentage Agreement Between the Choices of the 2 Cohorts of Expert Judges and the Researcher's Original Selection	70
Table 3.4. Judges' Choices Compared with Researcher's Original Selection	71
Table 3.5. Total and Average Number of Word Choices per Mode by Both Cohorts of Judges	72
Table 3.6. Hard-to-Differentiate Word Clusters	81
Table 3.7. Test Item Validation Exercise Example	86
Table 3.8. Occupational Profiles of Pilot Population	103
<b>Chapter 4</b>	
Table 4.1. Demographic Details of Pilot Sample	111
Table 4.2. Standard Error of the Mode Means of the Average Pilot Profile	115
Table 4.3. Patterns of Inter-Mode Correlations Using Pearson's R	119
Table 4.4. Pilot Norm Central Balance	121
Table 4.5. Pilot Norm FFI & Ratio Scores	123
Table 4.6. Pilot Norm Mode Means	124
Table 4.7. Comparison of Central Balance by Gender	125
Table 4.8. Comparison of FFI & Ratio Scores by Gender	125
Table 4.9. ANOVA Comparison of Male & Female Groups	126
Table 4.10. Comparison of Central Balance by Age	128

Table 4.11.	Comparison of FFI & Ratio Scores by Age	128
Table 4.12.	ANOVA Comparison of Age Groups	129
Table 4.13.	Comparison of Central Balance by Level of Professional Responsibility	132
Table 4.14.	Comparison of FFI & Ratio Scores by Level of Professional Responsibility	133
Table 4.15.	ANOVA Comparison of Level of Professional Responsibility Groups	133
Table 4.16.	ANOVA Comparison of TA Knowledge Groups	136
Table 4.17.	Ranges of Scores for Each Mode by TA Knowledge	138
Table 4.18.	The Effect of the 4 Factors on the Mode Means	139
Table 4.19.	ANOVA Comparison of All Pilot Groups	140
Table 4.20.	Comparison of Central Balance by Selection of 9 Pilot Groups	143
Table 4.21.	Comparison of FFI & Ratio Scores by Selection of 9 Pilot Groups	144
Table 4.22.	Comparison of the Mode Means by Selection of 9 Pilot Groups	145
Table 4.23.	Personal Details of the Highest Scoring Group	153
Table 4.24.	Personal Details of the Lowest Scoring Group	153
Table 4.25.	Summary of Differences According to Personal Variables	153
Table 4.26.	Comparison of Central Balances by Highest & Lowest Scoring Groups	155
Table 4.27.	Comparison of FFI & Ratio Scores by Highest & Lowest Scoring Groups	156
Table 4.28.	ANOVA Comparison of Highest & Lowest Scoring Groups	156
Table 4.29.	Summary of Scoring Details of Lowest 5 Scorers	165
Table 4.30.	ANOVA Comparison of Forms A & B	167
Table 4.31.	Reliability Coefficients for Forms A & B	174
Table 4.32.	Factor Analysis Component Themes in Forms A and B	178
Table 4.33.	Example 1 of the Component Pattern Analysis	179
Table 4.34.	Example 2 of the Component Pattern Analysis	180
Table 4.35.	Analysis of ACCOUNTING Items in Positive & Negative Themes	183
Table 4.36.	Test-Retest Studies Organisation of Treatment Factors	185
Table 4.37.	Pattern of Results of Test-Retest Studies	185
Table 4.38.	Completion Times for Forms A & B: Summary of Central Tendency Statistics	188
Table 4.39.	Summary of Responses to the Introduction & Instructions	188
Table 4.40.	Summary of Responses to the Questionnaire	188
Table 4.41.	Quantitative Analysis of Administrators' Evaluations	196
<b>Chapter 5</b>		
Table 5.1.	Order of the Data Analysis Process	199

# List of Illustrations

	Page
<b>Chapter 2</b>	
Figure 2.1. Traditional Model Usually Referred to as 'Functional Ego State Model'	17
Figure 2.2. "Totally Cured Person" Version 1	18
Figure 2.3. "Totally Cured Person" Version 2	19
Figure 2.4. Combination Diagram Structure and Function Shown Together	40
<b>Chapter 3</b>	
Figure 3.1. Example of the Mode Data Sheets	59
Figure 3.2. Word Selection Sheets for All Modes	60
Figure 3.3. Overview of Mode Descriptors	64
Figure 3.4. Inter Rater Agreement on the 5 Most Chosen Words for Each Mode, Shown on Functional Fluency Model Diagrams	66
Figure 3.5. Comparison of Inter Rater Agreement on the 5 Most Chosen Words for Each Mode Between the Combined British Cohorts & the German Group	68
Figure 3.6. Totals of Judges' Word Choices, Shown on Functional Fluency Diagram	73
Figure 3.7. Combined Word Pictures for All the Modes	78
<b>Chapter 4</b>	
Figure 4.1. Pilot Groups in Order of Frequency	110
Figure 4.2. Occupational Groups showing Context & Focus	111
Figure 4.3. Sample Details by Gender, Age, Professional Responsibility Level, TA Knowledge and Ethnic Origin	112
Figure 4.4. The Dual Orientation of the Data Analysis	112
Figure 4.5. Total Pilot Mode Frequencies, Showing Distribution Round the Mean	117
Figure 4.6. Comparison of the Pilot Data with the Phantom Population	120
Figure 4.7. Average Total Pilot Profile	122
Figure 4.8. Gender Comparison Plots	127
Figure 4.9. Age Comparison Plots	131
Figure 4.10. Levels of Professional Responsibility Comparison Plots	135
Figure 4.11. TA Knowledge Comparison Plots	137
Figure 4.12. Pilot Groups Comparison Plots	141
Figure 4.13. Selection of 9 Pilot Groups Comparison Plots	146
Figure 4.14. Highest & Lowest Scoring Groups Comparison Plots	157

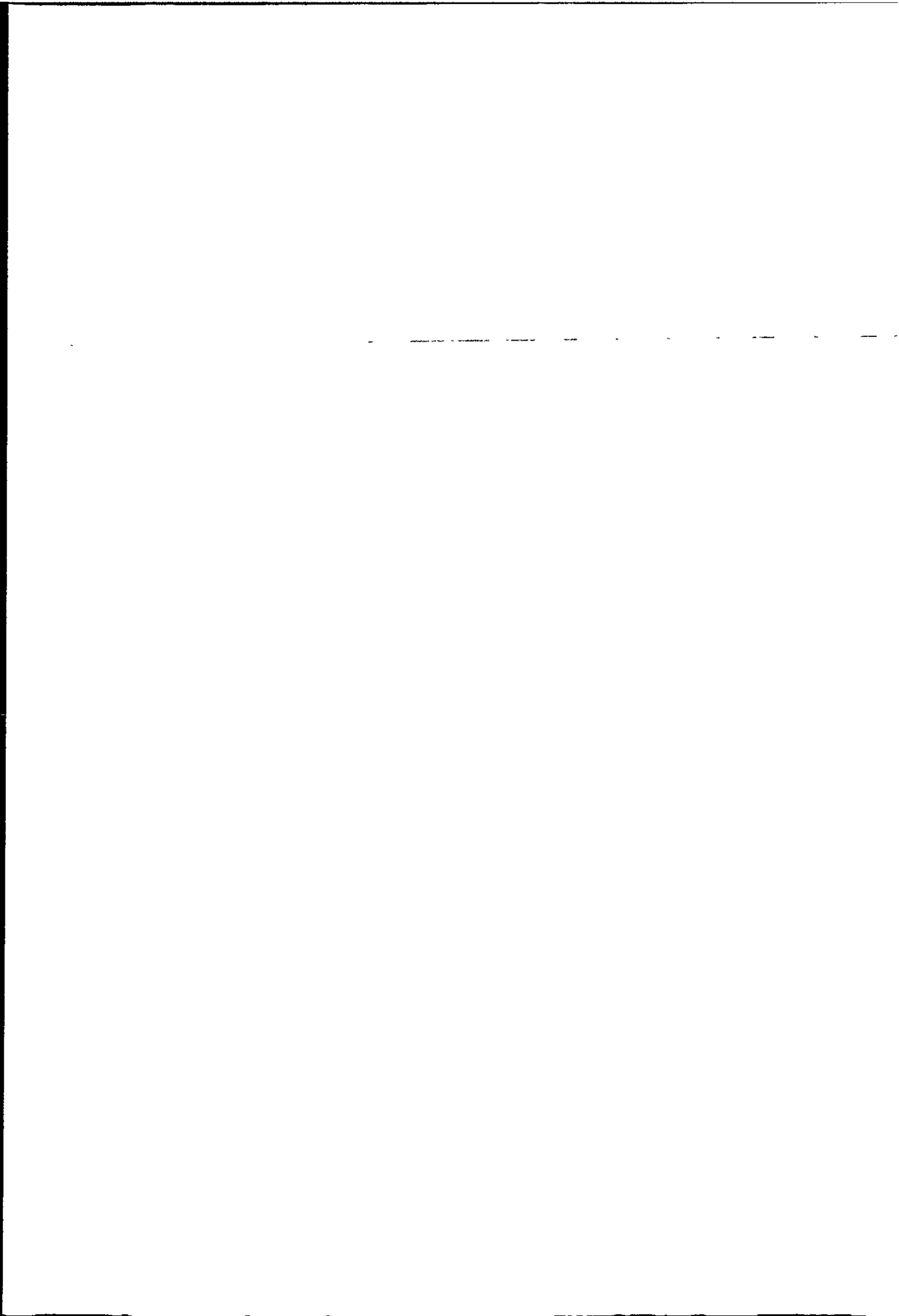


Figure 4.15.	Average Coefficient of Variation of Modes Pilot Population Profile (Norm)	169
Figure 4.16.	Scatter Plots of the Other Modes Against ACCOUNTING by Gender	171
Figure 4.17.	Double Paradox Matrix	195

## **Chapter 5**

Figure 5.1.	React and Respond Diagram	208
-------------	---------------------------	-----



# List of Appendices

		<b>Page</b>
<b>Appendix A</b>	<b>Statistics Tables</b>	
A.1.	All Pilot Groups' Mode Means in Order of FFI Mean	234
A.2.	Correlation of All Modes With Each Other Using Pearson's R	235
A.3.	Coefficients of Variation	236
A.4.	Reliability Analysis	237
A.5.1.	Exploratory Test-Retest Study No 1	243
A.5.2.	Exploratory Test-Retest Study No 2	244
A.5.3.	Exploratory Test-Retest Study No 3	245
A.5.4.	Exploratory Test-Retest Study No 4	246
A.6.	Factor Analysis Component Patterns (Form A 1-10 & Form B 1-9)	247
<b>Appendix B</b>	<b>Pilot Profiles</b>	
B.1.	Average Total Pilot Profile (NORM)	267
B.2.	Average Gender Profile Male	268
B.3.	Average Gender Profile Female	269
B.4.	Average Age Profile Under 20	270
B.5.	Average Age Profile 20-29	271
B.6.	Average Age Profile 30-39	272
B.7.	Average Age Profile 40-49	273
B.8.	Average Age Profile 50-59	274
B.9.	Average Age Profile Over 60	275
B.10.	Average Professional Responsibility Level Profile Basic Level	276
B.11.	Average Professional Responsibility Level Profile Manager Level	277
B.12.	Average Professional Responsibility Level Profile Director Level	278
B.13.	Average Pilot Group Profile 1 Further Education Lecturers	279
B.14.	Average Pilot Group Profile 2 Educational Psychology Students	280
B.15.	Average Pilot Group Profile 3 Police Officers in Training	281
B.16.	Average Pilot Group Profile 4 Psychometric Interpreters	282
B.17.	Average Pilot Group Profile 5 Mental Health Workers	283
B.18.	Average Pilot Group Profile 6 Behaviour Support Teachers	284
B.19.	Average Pilot Group Profile 7 Local Authority Managers	285

B.20.	Average Pilot Group Profile 8 Psychiatric Personnel	286
B.21.	Average Pilot Group Profile 9 Catering Students	287
B.22.	Average Highest Scoring Group Profile	288
B.23.	Average Lowest Scoring Group Profile	289
B.24.	Average Profile Form A	290
B.25.	Average Profile Form B.	291
<b>Appendix C FFI Development Documentation</b>		
C.1.	Test Item Validation Exercise Results	292
C.2.	Questionnaire Form A	307
C.3.	Questionnaire Form B	322
C.4.	Scoring Details (Handscore Version)	337
C.5.	Scoring Details (Computer Generated Functional Fluency Scoring Programme [FFSP])	342
<b>Appendix D</b>	<b>Code of Ethics</b>	<b>346</b>

# Acknowledgements

I have been assisted in this project by the energy and enthusiasm of many people. Firstly I wish to thank all those who actually took part: to give expert judgement, generate ideas, administer Pilot groups and to trial the instrument itself. It has been a cooperative venture. Hundreds of people have been involved, from several countries.

I am especially grateful for the help and encouragement from the Institute for Transactional Analysis both financial and personal.

Particular individuals have made invaluable contributions of wisdom, creativity and expertise, giving generously of their time and good humour: Ki Harley, Andrew Bleach, Graham Paley, Richard Field, Bill Heasman, Sally Maxwell, Lindsey March, Rosemary Bramah and especially Jacky Boucherat and her psychometric team.

I have benefited from helpful staff at the Rolle School of Education, University of Plymouth, in Media Resources, the Research Base and the Library. Louise Draper gave particular administrative assistance and Alex Palmer made computerised scoring of the instrument a reality with his creative skills, cheerful perseverance and patience with my initial ignorance.

Most of all I appreciate the inspirational support I have received from my supervisory team. Mike Beveridge helped with input in the last stages. Jeff Lewis gave ongoing support and expert assistance with the manuscript. Wendy Maull's brilliant teaching about mathematical expression of ideas made it possible for me to understand and enjoy the data analysis. Jill Rodd's understanding oversight made the project feasible. She steered my enthusiasm with skill and sensitivity, engendering hope and courage when I most needed it. I can't thank her enough.

Lastly, but so important, have been the patience and encouragement of my family and friends, particularly David Evans, who believed in me and helped me to keep going.

# Author's Declaration

At no time during the registration for the degree of Doctor of Philosophy has the author been registered for any other University award. This project was self-financed with support from the Institute for Transactional Analysis.

A programme of advanced study was undertaken which included seminars at the University of Plymouth Faculty of Arts and Education, the British Educational Research Association and with the Psychometric Team at the Enterprise Connection, Weymouth College, Dorset. Study and consultation with a variety of colleagues both nationally and internationally was a regular pattern.

## Publications

### Articles

- "Being In Charge", ITA News No 27, Summer 1990.
- "Anger Fuels Effectiveness", ITA News No 36, Summer 1993.
- "Becoming a TA Educator", ITA News No 48, Summer 1997.
- "Teaching with TA", ITA News No 54, Summer 1999.
- "Functional Fluency for Educators", Transactional Analysis Journal Vol.29, No.3, July 1999.
- "Educational TA at the Master's Level", The Script Vol. XXIX, No. 6, August 1999.
- "The Stroke Management Map", ITA News No 56, Spring 2000.
- "A Way of Teaching Life Positions as a Foundation for Teaching Game Theory", The Script Vol. XXX, No. 5, July 2000.

### Shared Editorial

- "Inspirations" Volume One, A Collection of Educational TA Papers, 1997.
- "Inspirations" Volume Two, A Collection of Educational TA Papers from WE Self Esteem Newsletters, 1998.

### Book Chapters

- "Nondirective Counselling in Schools" in Overcoming Learning and Behaviour Difficulties (5-16): Through Partnership With Pupils, eds K. Jones & T. Charlton, 1996, Routledge, London.
- "Becoming a TA Educator" and "Teaching with TA" in Educational TA for Teachers eds L. Laurinen & K. Nieminen, 1998, Jyväskylä University Printing House, Jyväskylä, Finland.

## Conferences Attended

Relevant conferences were attended and presentations made at the following:

- Institute for Transactional Analysis April 1998, Guildford: "Transactional Analysis Reaches Out".
- Education Network, ITA, October 1998, Bristol: "Opening Doors".
- International Transactional Analysis Association August 1998, Zürich: "Unity Through Diversity".
- Education Network, ITA, October 1999, Leeds: "Learning and Teaching With T A".
- Institute for Transactional Analysis April 2000, Canterbury: "Embracing Life's Differences".
- European Association for Transactional Analysis July 2000, Paris: "TA Worldwide".
- International Transactional Analysis Association August 2000, Nova Scotia: "Connecting in the New Millennium".

Signed.....*Susan H. Temple*.....Date.....*28.02.02*.....

# Chapter 1

## Introduction

*"Our stability is but balance, and true wisdom lies in the masterful administration of the unforeseen"*

Bridges (1929) "The Testament of Beauty"

Consideration of the well-being of educators in Britain at the close of the twentieth century indicates that there is a strong need to create a new focus on the relational human needs of all those involved in educational contexts. Also necessary are methods and materials through which they may enhance their own awareness and effectiveness. Under the pressure of more than a decade of efforts to 'raise standards' in education through emphasis on a National Curriculum and associated testing and assessment procedures, the emotional and social needs of both pupils and teachers have tended to be disregarded (Broadfoot 1999). *"Education is suffering more than other sectors from the problem of stress"* according to a Guardian Financial Services (GFS) marketing manager, Brian Rawle, referring to a national survey of more than 1200 people from nine different UK industries (GFS 1996). *"Fifty four per cent of people employed in education claim they work under high or very high levels of stress, compared to twenty per cent of people employed in the manufacturing industry"* (GFS p 1). As Weare (2000) claims, with reference to Leech (1995), McEwen & Thompson (1997) and Kyriacou (1996), *"Invariably such increased and diverse demands on teachers are leading to a rise in stress-related illness and absenteeism, a decrease in morale, difficulties in teacher recruitment and a rise in the teacher drop-out rate"* (page 7).

This psychological distress is not surprising when we take into account that human beings are social animals who learn from the outset of life how to develop psychologically through relationship with others (Stern 1985, Gopnik, Meltzoff & Kuhl 1999), and whose emotional well-being continues to depend on the quality of their ongoing relationships. As David Johnson (1993) points out:

*"Interpersonal relationships are essential for our personal well-being in many ways, helping us to grow and develop cognitively and socially, to build a positive and coherent personal identity, to feel we are firmly in touch with reality, and to gain and maintain psychological and physical health".* (page 2)

He also advises that, when human beings experience difficulties with building and maintaining positive relationships with others, they *"often develop considerable anxiety, depression, frustration and alienation"* tending to feel *"inadequate, helpless and alone"* (Johnson 1993 p 3).

STATE OF TEXAS  
COUNTY OF DALLAS

BEFORE ME, the undersigned authority, on this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, personally appeared \_\_\_\_\_, known to me to be the person whose name is subscribed to the foregoing instrument, and acknowledged to me that he executed the same for the purposes and consideration therein expressed.

My commission expires \_\_\_\_\_.

Notary Public in and for the State of Texas

My commission expires \_\_\_\_\_

Notary Public in and for the State of Texas

My commission expires \_\_\_\_\_

Notary Public in and for the State of Texas

This is an appropriate time for the new focus I refer to. The National Curriculum is under review. There are movements for Values Education and Education for Citizenship which are encouraging teachers to look again at the process of schooling and how it prepares children for adult life (Bird and Gerlach 1998), and there is much recent research (LeDoux 1994, Goleman 1998, Gopnik, Meltzoff & Kuhl 1999) which adds new dimensions of knowledge about how human beings develop into the effective people referred to by Johnson.

The post-war focus on affective aspects of learning and psychological growth developed in the 1950s when humanistic psychologists such as Abraham Maslow and Carl Rogers began to have a significant influence in educational circles. Rogers' (1951) 'core conditions' (unconditional positive regard, empathy and congruence) influenced a good deal of the training of teachers, as well as counsellors and psychotherapists, in order to prepare them to facilitate emotional wellbeing as a prerequisite for healthy development and learning (Maslow 1968).

Virginia Axline, the author later famous for her book 'Dibs: In Search of Self' (1969), and a renowned child psychotherapist, made a plea to teachers in the late 1940s to tune in to children's feelings and respond to them with acceptance and understanding if they wanted children to develop inner confidence and self discipline as well as positive attitudes to others (Axline 1947).

Many influential writers from the 1950s onwards focused on the crucial nature of the teacher-pupil and parent-child relationship as a major factor in the learning process at all ages, but particularly in the early years (Bettelheim 1950, Glasser 1961, Holt 1964, Ashton-Warner 1965, Dreikurs 1968, Dennison 1969, Gordon 1970, Ginott 1972, Aspy & Roebuck 1977).

Based on these writings, much primary teacher education gave a strong emphasis on the need for teachers to develop themselves as people, with high levels of interpersonal skill, in order that they could best promote the pupils' development of their full 'humanness' (Feeney, Christensen & Moravik 1996). On the assumption that interpersonal effectiveness is learned by example and through the experiences people have within relationships (Johnson 1993), priority was given to the way that teachers related to children. What they showed them by example, and conveyed through non-verbal messages and the 'hidden' curriculum, was considered even more important than the actual 'teachings' about feelings and relationships (Feeney, Christensen & Moravik 1996). Success in this area required high self-awareness and emotional maturity and health in teachers, attributes that also contributed to minimising the stress of working in educational institutions (Gray 1988, Dunham 1992, Joseph 2000).

The first part of the report is a general survey of the situation in the country. It is followed by a detailed description of the various regions and their respective economic conditions. The author then discusses the social and political aspects of the country, and finally offers some suggestions for improvement.

The second part of the report is a detailed study of the agricultural sector. It covers the various crops grown, the methods of cultivation, and the problems faced by the farmers. The author also discusses the role of the government in the agricultural sector and offers some suggestions for improvement.

The third part of the report is a detailed study of the industrial sector. It covers the various industries, the methods of production, and the problems faced by the workers. The author also discusses the role of the government in the industrial sector and offers some suggestions for improvement.



However, in spite of the fact that these fundamental principles were largely accepted in most specialised teacher education circles, it would be a mistake to assume that they were ever fully put into practice in schools in the UK, especially in the secondary sector where the majority of teachers only do one year's professional training following their subject degree. When the new political demands on the education service came into force in the 1980s, the backlash "*swift and all encompassing*" (Broadfoot 1999 p 29) was largely against a fantasy of what student-centred education might have become if only teachers had dared to put it fully into practice. It is probable that in many schools humanistic approaches were never actually used consistently at classroom level. Even by the 1980s, my experience in the delivery of in-service courses attempting to introduce student-centred methods such as those of Brandes and Ginnis (1986) was that they were often perceived as threatening to teachers' authority and dangerously 'laissez-faire'.

This fantasy about humanistic approaches was not without a grain of truth, however. In the 1960s, such approaches did encourage an emphasis in educational thought on the importance of self-development and the belief that individuals know organismically what is best for them. In the liberation of valuing individuals for themselves, essential self-discipline and consideration for others sometimes got lost. Person-centredness became bound up with the 1960s' revolt against dogmatic, coercive authoritarian attitudes in many spheres in society, including education. There was a swing towards laissez-faire methods epitomised by a fear of damaging children by imposing any rules (Neill 1960, Feeney and Christensen 1979). In throwing out judgmental and punitive methods, they also rejected necessarily directive expectations of appropriate behaviour. The polarities of 'hard' and 'soft' left teachers having to choose, so they thought, between the old authoritarian ways or 'do-as-you-please' in the classroom. This swing from 'too hard' to 'too soft' missed the point that what is necessary is a balanced combination of empathic kindness and firm authority (Dreikurs 1968, Temple 1999). The missing element has been the understanding of the nature of self-discipline and cooperation, and how these are learned (Baumrind 1991, Novey 1998). Writers such as Illsley Clarke and Dawson (1989) have clarified the elements of effective upbringing and how they are manifested in practice. The principles they emphasise take up-to-date research into account. They preserve the healthy legacy from humanistic approaches, and show what children need in terms of "*structure and nurture*" (Illsley Clarke 1978) if they are to grow up "*able to be empathic, morally and socially responsible and able to sustain relationships*" (Bird and Gerlach 1998).

Teacher Education under the political requirements of the 1980s and 90s has increasingly lacked emphasis on classroom and behaviour management in terms of developing understanding of how to relate to children and other adults in order to meet their emotional and social needs as learners (Campbell 1999). Many young teachers are clear about what they are supposed to deliver in terms of the curriculum, but somewhat at a loss as to how to go about it successfully in terms of the pupils' overall development. There are now inadequate and ever decreasing opportunities for student teachers to focus on 'people skills', as they are often called, in the push to concentrate on specialist subject study (Weare 2000, Hayes 2001). This means that teachers have been emerging ill-equipped to support or promote the social and emotional development of their pupils, and ill-prepared to handle the psychological demands of the highly pressured work in our schools at present. As Weare (2000) points out, *"Given the lack of basic education in this area, it is likely that teachers will have had little or no education on it themselves, unless they have been lucky, or have sought it out"* (page 131). How do such teachers enable the *"development of individuality and creativity in relation to culture"* held by Laurence Stenhouse (1967 p 58) to be central to the core business of education? Patricia Broadfoot in her 1999 Stenhouse Lecture answered this question by declaring that to enable this development, teachers need *"the capacity to motivate individuals to acquire the necessary cultural tools and to interact with others on the basis of shared understandings and values"* (Broadfoot 1999 p 18). This capacity in turn requires the necessary 'emotional literacy' i.e. the self awareness and management, motivation, empathy and social skills identified by Goleman (1998) and Watkin (1999). I am concerned that an aspect of the teacher stress referred to at the start is fuelled by a growing sense of the reality expressed by Steinberg (1996) that:

*"No curricular overhaul, no instructional innovation, no change in school organisation, no toughening of standards, no rethinking of teacher training or compensation will succeed if students do not come to school interested in, and committed to, learning"* (page 194).

Because of the continuing demands for schools to implement curriculum and other changes, emotional health and effective professional relationships in education are therefore needed as never before, for the enhancement of both the relationships with pupils and those with co-professionals (Aspy & Roebuck 1977). Teachers in management roles need to understand how to give strong leadership that promotes high morale and motivation, inspiring their staff to give of their best. They need to be able to be genuinely empathic and compassionate in order to support staff who feel insecure or threatened. All staff need to know how to work openly and cooperatively and how to be assertive as well as considerate and mutually encouraging.

An aid to these ends would be a practical tool for indicating, and also, more importantly, for promoting and developing, the emotional literacy that would support the necessary interpersonal effectiveness to enhance communication at every level (Morris 1997). This includes the communication necessary to help motivate pupils as well as that needed for reducing stress levels. Such a tool must be easy to administer, and yet tap into profound insights that with skilful feedback would be supportive of personal development. It must be based on sound theory that illuminates the nature of human interaction in a powerful way that speaks to the human condition.

Transactional Analysis (TA) is one such theory. Its concepts of ego states and transactions that map personality development and communication are both simple and profound. They help to make sense of human intrapsychic and interpersonal dynamics, describing and explaining them in a way that people usually find appealing and quickly comprehensible (Stewart 1991). Applied educationally, TA concepts underpin a methodology with a rationale closely resembling that of the Adlerian educational psychology propounded by Rudolf Dreikurs (Dreikurs 1968, Dreikurs & Cassel 1990).

I have found that much inner confusion and ensuing distress have been alleviated using TA's ego state models to depict the sudden switches of attitude and state of mind frequently experienced when people complain of misunderstandings and conflicts in schools. This is very helpful for teachers. Once the sources of these common phenomena are identified, and the dynamics of the inner experiences can be explained, they often regain a sense of composure and confidence that allows for greater objectivity and promotes professional expertise. They re-establish their sense of proportion, and are more likely to stay in charge of their responses to others, even if there is aggravation and anxiety. In working with teachers, I use TA to help them understand how different sorts of transactions with others are brought about. They learn how to initiate communication even when it is hard to do so, how to break it off when it seems repetitive and unrewarding, and, most useful of all, how to identify and deal with those occasions when the hidden messages in the communication are not congruent with the declared statement. Schools are complex institutions involving a variety of groups of people who sometimes have competing needs. Teachers are expected to know how to deal with these needs expertly. I consider that they need adequate preparation and training to do so effectively, and a coherent, practical theory to inform their understanding and skill.

The aim of this study, therefore, is to produce an instrument based on TA's ego state theory that will indicate a person's balance, range and pattern of interpersonal behaviours. Results

would provide a means for developing self awareness and for the identification of strengths, weaknesses and overall interpersonal effectiveness. Participants who already know and use TA theory in their work will find the results can help them to extend their knowledge of the approach. Those unfamiliar with TA will find the results helpful as an introduction to the its usefulness as a practical educational psychology. Such an instrument would complement psychometric tests such as the 16PF (Cattell 1989) by focusing on actual behavioural patterns and styles. The goal in using the instrument will be to enhance the professional's facilitative qualities of teaching or managing, as these have been shown to be vital aspects of educational effectiveness (Aspy 1972, Aspy & Roebuck 1973, 1977). Skilled feedback of test results will provide stimulation to in-depth personal development to help teachers find their own style and own identity as professionals (Feeney, Christensen & Moravik 1996).

In my experience TA has frequently been used informally in questionnaires that are part of personal development training programmes in commercial or clinical contexts. Though usually good fun and useful to do, the results are not always reliable because the tests are seldom based on well-validated data. This study will be grounded in thoroughly validated theoretical constructs developed to enhance an educational TA frame of reference for teachers in the new millennium.

In preparation for the development of this new instrument, a critical analysis of relevant history, theory and research in the field of Transactional Analysis was undertaken and is presented in Chapter 2.

## CHAPTER 2

# LITERATURE REVIEW: HISTORY, THEORY AND RESEARCH

There were powerful reasons for the choice of Transactional Analysis (TA) as the preferred psychological theory to underpin the psychometric instrument proposed in the introduction. The decision was taken by degrees in a process lasting more than ten years of professional exploration of the TA approach in psychotherapy and education. To illuminate this extended process, Chapter 2 has been divided up into the following sections:

- Creation and development of TA as a psychological theory, identifying key characteristics of TA philosophy and practice.
- Theoretical and contextual issues and influences in TA tradition and development.
- TA research and dilemmas of definition.
- The development of Temple's Functional Fluency model.
- Some issues in psychometric development.
- Contextualisation of Temple's model in terms of psychometric developments and teacher education.

### **CREATION AND DEVELOPMENT OF TA AS A PSYCHOLOGICAL THEORY, IDENTIFYING KEY CHARACTERISTICS OF TA PHILOSOPHY AND PRACTICE.**

In order to reflect on and clarify my rationale for the educational model of ego state functioning I envisage, I reviewed aspects of TA history relevant to my project. Reviewing the history of TA can help to promote realistic and constructive understanding of the need for constant theoretical development in general in order to keep the approach lively and up to date and avoid the danger of stagnation and resistance to change (Tilney & Phillips 1998). This would be especially tragic in the case of a psychology invented by someone as original and creative as Eric Berne, who was always interested in new ideas. Critical reflection should have a positive influence in the cultural development of ideas. Making this point in her Stenhouse lecture in 1999, Broadfoot quoted Foucault (1988), who claimed that,

*"Criticism is a matter of flushing out thought and trying to change it; to show that things are not as self-evident as once believed, to see what is accepted as self-evident will no longer be accepted as such"* (page 155).

Although formally trained in TA psychotherapy, I have always approached the learning of TA as an educator, and therefore my critical reflection on TA history, theory and practice tends to be that of the 'stranger or outsider'. Goleman (1997) points out the value of this stance and the

objectivity it offers. He emphasises the positive opportunities that the 'stranger' role brings because he or she is both 'inside' and 'outside'.

*"His objectivity is not simple detachment, but a combination of indifference and involvement, intimacy and distance. In his objectivity the stranger has a certain freedom: he has no obligation to the group that might skew his perception or prejudice his understanding"* (page239).

I identify strongly with the sense of paradox expressed by Goleman and recognise how I inhabit this role.

Transactional Analysis was created by Eric Berne M.D. in the 1950s in the USA. Two aspects in particular of his life experience probably fuelled his motivation. Firstly, he grew up as the admiring and idealising son of a doctor in a poor area of Montreal, Canada. Perhaps to emulate his father, he was always keen to help patients in the most effective way possible. Secondly, he was an army psychiatrist in World War Two required to make life-affecting judgements on the mental status of his patients in great numbers in swift succession for days at a time. Out of this necessity he developed a lifelong interest in the dynamics of intuition along with skills of observation of acute sensitivity and precision (Berne 1949). These factors were later manifested in the creativity and practicality of the TA approach.

In response to the continuing urgency post-war to provide psychiatric help to people quickly and cheaply, Berne developed a group psychotherapy approach that utilised psychoanalytically-based ideas in a new way. Still in psychoanalytical training himself, firstly with Paul Federn and later with Erik Erikson, he drew on:

*"...an extremely wide and diverse range of ideas: Freudian theory, object relations, behavioural analysis, Sullivan's insights into the relevance to mental health of interpersonal and social processes and many others. Berne's aim was for the new discipline to be scientific but also to hold a position where mind and behaviour meet"* (Tilney 2000 p 3)

His approach was novel, especially in offering an accessibility of understanding through use of vivid metaphorical terminology that ordinary people could relate to easily and quickly. It was also ahead of its time in terms of its emphasis on phenomenology and constructivism, while in its focus on behavioural analysis and change, it was a move away from classical psychoanalysis. When Berne's application for membership to his psychoanalytical association was refused in 1956, he decided to pursue his own separate professional pathway and develop his own method which he called Transactional Analysis. Berne (1949) claimed:

*"There is a time for scientific method and a time for intuition – the one brings with it more certainty, the other offers more possibilities; the two together are the only basis for creative thinking"* (p 30).

Berne's new approach incorporated a lively dynamic of checking out theoretical hypotheses against real-world observations, both personal and contextual. Stewart (1991) considers that this

aspect of having observability as the cornerstone of the method was Berne's main contribution to psychotherapeutic developments in the second half of the 20<sup>th</sup> century. In addition to observability, the feature of accessibility in Berne's style of psychotherapy promoted another innovative development. Berne relinquished the all-knowing expert and authoritarian stance of the traditional analyst, whose role was to interpret and pronounce, for a more collaborative, albeit active, role of co-researcher in which the patient's perceptions were honoured and used as key evidence in the mutual psychotherapeutic endeavour. This was a change from 'knowing words' to describe phenomena to 'knowing how to act' in respect of phenomena (Stewart 1991 p 4).

The new approach of TA subscribed to the humanistic principle of giving supreme significance to personal experiences and their unique meanings. TA claimed to name, describe and explain human experience and dynamics using a generalised structure that conveyed the underlying pattern of meaning common to human beings. Thus it aimed to provide the combined facility of "*describing both the individual experience and the universal nature of a given human phenomenon as it is lived in real life*" (Mruk 1999 p 7). TA was, and is, therefore, a phenomenological approach to understanding the human condition. These fundamental characteristics of TA are essential components of the theoretical underpinning of my project.

Berne was fascinated by how people tick and by what makes them behave as they do. He observed human encounters in minute detail, paying attention to both overt and covert communication. Claude Steiner, one of Berne's closest colleagues, observed, "*He encouraged verbs in descriptions of human beings*" (1974 p 16). Berne realised the importance of the non-verbal aspects of communication as crucial signals of the underlying meanings and implications of what they were saying. This created understanding of the links between the interpersonal and the intrapsychic. Berne learned and taught the mapping of people's internal states by his focus on these shifts of behavioural signals, and also through consultation with the patient. He called this *ego state analysis*, basing his theory on the ego psychology of Paul Federn (1952) and Edoardo Weiss (1950). His ego state theory was a development of psychoanalytical concepts of the ego, which Berne referred to as "*the core in the apple of TA*" (1961 p 257).

Berne also built Freudian concepts of transference and repetition compulsion into TA, using the analysis of moment by moment transactions, 'transactional analysis proper', to identify the former, and the analysis of predictable transactional sequences with negative outcomes, 'game analysis', to identify and describe the latter. In TA the term 'transaction' is used technically to denote the exchange of some form of attention between two persons. A unit of attention is referred

to technically as a 'stroke'. The precursors to Berne's concept of 'life script' were Alfred Adler's (1963) ideas about the way people formulate a 'life goal' and unconsciously follow a 'life plan' to achieve it. Berne developed 'script analysis' to examine these dynamics in patients' lives. All four analyses in TA, ego state, transactional, game and script, are designed to relate coherently. Diagnosis is formulated from clues in social and behavioural observation as well as from somatic, phenomenological and historical data.

Berne developed his system with the aim of creating a coherent approach that could be used as a resource shared by both practitioner and client/patient. In this way the system manifested his values of respect and acceptance of people for who they were and his belief that 'cure' was possible, even though he sometimes expressed his view that 'cure' might also be improbable, as at the end of 'Games People Play' (Berne 1964). The initial development of TA used a process of assimilative integration of such concepts as those outlined above (Tilney 1998). Later developments of theory by other TA practitioners were incorporated more loosely into a wide-ranging matrix of connected ideas and models using what Tilney then terms an 'additive model' of integration (Tilney 1998).

After the urgency for Berne in the 1940s to find fast-working psychotherapeutic methods, and the study and discoveries of Berne and colleagues in the 1950s, came the blossoming of TA in the 1960s. TA fitted well into the human potential movement of that time in the USA, with Berne's stress on autonomy and empowerment of the individual. His declared aim for TA was the attainment of autonomy – the harmonising of intrapsychic energies in order to release a person's potential for awareness, spontaneity and intimacy. He introduced the term "*physis*" for a person's own unique thrust of life force, and called it one of the "*four forces of human destiny*" (1972 p 56). TA was a powerful expression of the mood of the Californian 1960s. Marshall McLuhan (1964) described the nature of this mood:

*"Every culture and every age has its favourite model of perception and knowledge that it is inclined to prescribe for everybody and everything. The mark of our time is its revulsion against imposed patterns. We are suddenly eager to have things and people declare their beings totally. There is a deep faith to be found in this new attitude – a faith that concerns the ultimate harmony of all being"* (page 5).

In TA the term analysis was used strictly in accordance with its Greek origins of 'to loosen the bonds, resolve, as of knots'. To use ego state, transactional, game or script analysis was to enable freedom from inner conflict, psychic confusion and deficits of developmental experience, and to promote new response-abilities (sic) and social effectiveness (Clarkson & Gilbert 1990).



This helps to explain how it was possible that TA was suddenly and unexpectedly hailed as an everyperson's cure-all in the wake of the best-seller success of Berne's book 'Games People Play' in 1964. Intended for a professional audience who would already have read his detailed exposition of TA theory in his 1961 book 'Transactional Analysis in Psychotherapy', the later book contains only sketchy and summarised theoretical concepts (Stewart 1992) and incomplete representation of game theory. However, the catchy terms and the vitality, humour and accuracy of portrayal of common human social dilemmas caught the public imagination and in a short space of time literally millions of people had heard of TA and thought they knew all about it. 'Games People Play' was serialised in mass-circulation magazines, chosen as Book of the Month and eventually translated into fifteen languages (Stewart 1992 p 7). TA terms such as 'OK', 'stroke', 'game' and especially 'Parent', 'Adult' and 'Child' became everyday vocabulary, though it is likely that people lacked full understanding of the terms' original profound and specific meanings. This mass popularity lasted at least a decade, during which time Berne died prematurely aged 60 in 1970. TA theory continued to develop and the organisation known as the International Transactional Analysis Association (ITAA) grew to its maximum worldwide membership of 11,000 by 1976. Also during this time, fuelled by the fervour of enthusiastic TA devotees, occurred the unfortunate oversimplification of ego state theory, the process of which is recounted and discussed in detail by Ian Stewart in his book on the life and work of Eric Berne (1992).

This aspect of TA history and its theoretical consequences within the tradition were important factors that impacted upon the way I began to develop my model of ego state function for educational use and also as the basis for my project. They were not so important, however, as the inherent accessibility and observability of TA as outlined above. These characteristics both contributed to the effectiveness of the approach as a social psychology as well as a psychology of the individual, principally by making TA practice relatively easy to replicate, and therefore relatively straightforward to teach (Stewart 1992).

Accessibility in TA was built in by Eric Berne through his use of vivid and cryptic terminology often made up from ordinary words tinged with wry humour, together with his use of diagrams to depict concepts. The combination helped to make TA instantly attractive to the general public. It also helped to alleviate the difficulties identified by Lanyon & Goodstein (1997) in the communication of psychological matters:

*"The inability of most adults to describe and discuss behaviour and psychological states clearly and comfortably creates problems for organisations as well as for individuals. This handicap is enhanced by the often technical language of professional psychology" (page 286).*

TA made it easier to understand the complexities of the human condition. John Dusay (1977)

commented:

*"Visual symbols have had particular importance in TA. We've found it makes things simpler – a good eidetic image is worth thousands of explanatory words"* (page xix).

These factors manifested in practice the psychotherapeutic values and principles referred to above in terms of the new TA approach. Genuine collaboration and sharing of ideas was facilitated by the fact that the ideas could be drawn and described in familiar words and outlines. This has great educational value. The proposed TA psychometric instrument would aim to incorporate these values for the same reasons, to demonstrate respect for all persons and in order to facilitate responsible collaboration with the goal of client empowerment.

## **THEORETICAL AND CONTEXTUAL ISSUES AND INFLUENCES IN TA TRADITION AND DEVELOPMENT.**

In order to assess the effects of theoretical and contextual issues in the development of TA, it is necessary to take seriously the impact and consequences of its sudden popularisation described above. Aspects of TA that made it so appropriate and widely acclaimed in the 1960s and 1970s have, paradoxically, also proved to have had some disadvantages in terms of acceptability within academic disciplines of science, health and education:

1. TA has a tarnished reputation. The fame of TA as a Californian pop psychology now haunts the endeavours of serious practitioners world wide in their search for establishment acceptance of TA as a reputable psychological approach (Stewart 1992).
2. TA's popular literature is out of date. The style of the terminology and many of the books reflects the culture of TA's original geographical, historical and social context. Thus, thirty years on, in other parts of the world, some aspects of TA can seem incomprehensible, unappealing or may simply be misunderstood. The question is how to update and/or translate without losing the original meaning and potency of the ideas.
3. The value of TA's style is misunderstood in some contexts. A continuing dilemma is how to make acceptable to the conservative medical and educational establishments an approach that uses jokey, colloquial language (Stewart 1992 p 118).
4. The integrative nature of TA as an approach and methodology means it belongs everywhere and nowhere. Though Cornell (1998) considers TA's integration of *"intrapsychic dynamics with interpersonal behaviours"* (Clarkson & Gilbert 1990 p 199) to be its *"fundamental and distinguishing asset"* (page 2), this can mean that people do not know where to place TA, and it

can finish up rejected as an approach by both psychodynamic and behaviourist schools. At present, in the UK, it belongs formally in the Humanistic Integrative Psychotherapy (HIPS) section of the United Kingdom Council for Psychotherapy (UKCP), and is named as one of the recognised types of psychological therapy by the Department of Health (2001). This recognition, however, is not echoed in all countries, including the USA.

5. TA theory lacks empirical scientific validation. In spite of Stewart's point (1992 p 18) about the suitability of TA theory for empirical testing, there has been a surprising lack of in-depth research effort during the forty or so years of its existence to validate the various TA constructs in terms of their theoretical claims. It may be that TA practitioners (with a few notable exceptions) were too busy putting TA to good use on the wave of popular excitement to have the time or inclination to undertake the necessary research to earn acceptance as a scientific modality. Though possibly meeting with some unconscious resistance, this matter is being addressed urgently at the present time (Stewart 2001).

### **The TA Literature Following the 1960's Popularisation**

An important matter following the event was the nature of the literature produced in its wake. This literature was stimulated by the development of linked and elaborated TA models, each with a different emphasis and which became the three 'schools' of TA (Tilney & Phillips 1998): the Classical School (Karpman, 1971, Dusay, 1977, Moiso, 1985), the Redecision School (Goulding & Goulding 1979) and the Cathexis School (Schiff, 1975, Mellor, 1980). Most of the material was published as articles in the Transactional Analysis Journal (TAJ) and had an in-house flavour because of the specialised terminology used (Steiner 1974, Karpman 1968). Many books were also written for the general public, mostly in the self-help genre and using an informal style (James & Jongeward (1971), Steiner (1977), Corkille-Briggs (1977). Some books reflected the use of TA in commerce (Jongeward 1976) and education (Ernst 1972). Several short booklets and primers giving a very brief introduction to TA were produced (Steiner 1971, Duff 1972, Woollams, Brown & Huige 1976, Campos & McCormick 1980). Books in the 1970s attempting to give a full overview of TA in some depth were few. Instead, they either took a particular view-point and practice method such as 'The Cathexis Reader' (Schiff et al 1975) or 'Egograms' (Dusay 1972, or they were collections of articles such as 'TA after Eric Berne', edited by Graham Barnes (1977), and 'Redecision Therapy: Expanded Perspectives', edited by Leslie Kadis (1977). Some focussed on a particular professional context such as alcoholism (Steiner 1971) or parent education (Babcock & Keepers 1976). An exception was the 'Total Handbook of TA' by Woollams & Brown (1978),

which attempted to give a complete theoretical overview.

This easy-to-read, lively and accessible body of literature, so attractive to the general public of the time, on the whole did not match the accepted scientific norm of academic-style writing. This reinforced the paradoxical factor mentioned earlier of the accessibility of TA being at one and the same time an advantage and a disadvantage. TA's early literature made it less likely that it would be scientifically acceptable. As well as this, the style reflected the culture of the time, see Point 1 above, rather than a timeless academic culture, and has become dated, losing some of the original popular appeal. It is as though TA went 'out of fashion' with the fading of the 1970s.

Ian Stewart (1992), in the criticisms and rebuttals chapter of his book on Eric Berne, gives a name to the factor underlying this phenomenon. He calls it the "*frozen image*" of TA (page 121). It is a complex 'chicken and egg' phenomenon. TA's media popularity, as pointed out above, sprouted from a simplified version of the theory, so starting a trivialising process that has in its turn caused TA as a theory to be trivialised by people who think that the 'frozen image' version of TA is the real TA. In fact debate about what is the 'real TA' continues through to the present time, even within the TA community. Misinterpretation of Berne's original work has, however, more sources than the sudden popularity in the 1960s leading to the simplified media exposition. Some TA writers have actually misinterpreted ego state theory in particular. Sometimes they, including Eric Berne himself, have written about it in ways that invite misinterpretation (Stewart 1992 p 122). This has caused problems for theoretical exposition and interpretation.

### **Pitfalls Inherent in the 'Frozen Image' of Ego State Theory**

As ego state theory and analysis is the area of TA most relevant to the theoretical basis of my project, it is essential that I examine the issues surrounding the development of ego state theory. In wanting to draw on the riches of the original TA theory in my project, I need to avoid the danger of developing work based on the theoretical confusions of TA's 'frozen image'. There are three pitfalls.

#### **Pitfall 1: Inaccuracies in defining ego states**

The first pitfall concerns the definition of ego states. There are two aspects to this matter. Both concern the importance of the key elements of Berne's original ego state definitions, those that enable the most profound psychological understandings. The key elements are:

- The time dimension difference between Adult ego states on the one hand and Parent and Child ego states on the other.
- The total personhood of all ego states in all three categories.

The original Bernian definitions of the three categories of ego state, with these elements identified are as follows:

**Table 2.1. Bernian Definitions of Ego States, (adapted from Stewart 1992 p 123)**

Category	Definition	Time Dimension
<b>In an Adult ego state</b>	The person's feelings, thoughts and behaviours are age-appropriate in the here-and-now.	<b>Present</b>
<b>In a Child ego state</b>	The person replays archaic feelings, thoughts and behaviours from his or her own past, especially childhood.	<b>Past (To do with self)</b>
<b>In a Parent ego state</b>	The person replays feelings, thoughts and behaviours that are borrowed from an authority figure, especially parents.	<b>Past (To do with incorporations from other people)</b>

The first aspect of this matter of definitions concerns the stereotyping of concepts of ego states by using the phenomenon of reification. Given these original definitions as above, it can be said that any ego state a person is in will be qualitatively unique to that person in that moment. Accurate diagnosis (Berne 1961) is complex and requires four aspects: behavioural, social, historical and phenomenological, in order to make full sense of the person's experience. In contrast, to imply that a Parent or an Adult or a Child ego state can be described in one specific way is to talk in stereotypes of a limited nature and to reduce the sensitivity and precision of ego state analysis. Berne himself invited this possibility in some of his writing. Stewart (1992) explains the process clearly by quoting Berne and then pointing out how the trivialising habits ensued:

*"In describing his 'first rule of communication', Berne wrote, "It is irrelevant to the rule whether two people are engaging in critical gossip (Parent-Parent), solving a problem (Adult-Adult), or playing together (Child-Child or Parent-Child). (Berne 1964 p 28). What Berne meant, of course was that when people are in a Parent ego state, they may typically express it by engaging in critical gossip. (This assumes that gossiping is a behaviour they have borrowed from their parent figures). Berne was illustrating the nature of Parent by describing one of its most typical manifestations. The same applies to the two other classes of ego states that he describes in the quotation." (page 125).*

What seems to have happened as a result of Berne's vivid, but short hand, style of writing is that readers have construed his illustrations as definitions. They turn the ideas round. As Stewart (1992) suggests, they assume that:

*"When people are gossiping critically, that means they are in Parent. When they are solving problems, they are in Adult, and when people are playing together, they must either both be in Child, or one be in Child and the other in Parent". (page 125).*

It may, however, be useful in professional practice to use the terms Parent, Adult or Child in a metaphorical, generalised sense as in the example, *"In hypomania there is an exclusion of the Parent by the Child with the cooperation of a contaminated Adult"* (Berne 1961 p 54). This neat and active expression of complex ideas in a simple way using such reification was part of the genius of Berne (Stewart 1992 p 128). It is important also to note that when writing about the

training of psychotherapists, Berne explained this 'as if' language as a therapeutic shorthand, necessary in the circumstances and done in the full knowledge of the nature of the reification. The problems arose when it was implied that this shorthand was the actuality of the theory. In addition, when authors wrote that there were just three ego states (James & Jongeward 1971, Steiner 1974, Woollams, Brown & Huige 1976), this in turn led to further simplification and trivialisation.

The second aspect of the matter of definitions of ego states concerns this further development. An important characteristic of each of the three categories was equated with the reified category name, resulting in explanatory statements such as: 'Parent is value judgements', 'Adult is thinking' and 'Child is feeling'. Clear, but theoretically inaccurate, diagnosis on this basis was therefore made out to be: 'If you make a value judgement you are in Parent', 'If you are thinking, you are in Adult', or 'If you are feeling, you are in Child'. Authors writing in these terms reinforced TA's reputation as simplistic. The fact is that, according to Berne's original definitions, value judgements, thinking and feeling can all be done from all categories of ego state; what is more, diagnosis is a complex and subtle matter.

Both the time dimension and the full nature of what Berne defined as an ego state, see above, were obscured by these developments, causing confusion between what Mruk (1999) refers to as "*universal and particular dimensions of experience*" (page 7). This endangered the precision of ego state theory for addressing both the general structure of a human phenomenon and the particular diagnosis of individual experience of that same phenomenon. "*Berne's language was simpler than his ideas*" (Stewart 1992 p 127). From the beginning the danger was that his examples, descriptions or partial summaries would be taken sometimes as the 'whole concept' or the definition. When this happened, it caused conceptual confusion expressed in ambivalence of meaning in the terminology. The key elements of ego state analysis for profound explanation of human phenomena were therefore compromised, particularly in matters of research, see below.

#### **Pitfall 2: Confusion between structure and function of ego states**

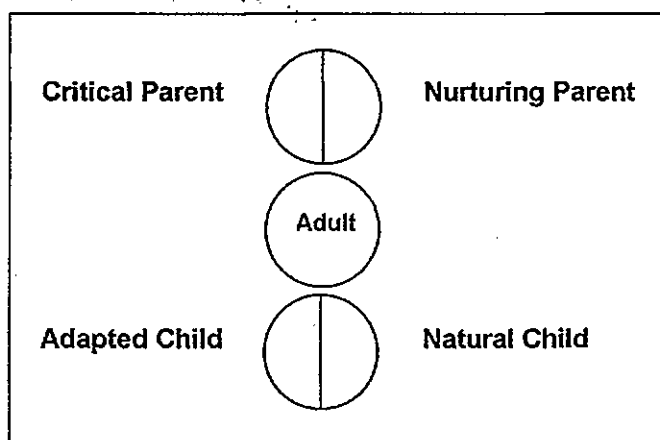
The second pitfall is related to the first. It concerns the matter of confusion between ways of talking about ego state structure and ways of talking about ego state function. This too involves a complex process of reification. As well as defining ego state categories clearly as above, Eric Berne also originally outlined a set of classic ego state functions. He also sometimes wrote about them as though they were actual ego states themselves rather than in fact manifestations of ego states. The nature of ego states and the way they operate cannot be separated in real life, but

theoretically it is vital to understand the differentiation between the entity and a function of the entity (Stewart & Joines 1987).

This issue has been compounded over the years by imprecise wording that has become imbedded in ways of talking about TA theory, in other words by the 'verbal habits', referred to by Sarbin (1968). Instead of saying there are ego states and there is ego state analysis that can be done structurally or functionally, using models of structure and models of function, TA practitioners and writers have often talked of 'structural ego states' and 'functional ego states' as though they were all actual entities. It was this aspect of the reification habit that resulted in the popularly recognised set of so-called 'functional ego states' called Controlling Parent, Nurturing Parent, Adult, Natural Child and Adapted Child. Although this model provided a simplistic and stereotypical way of referring to certain classes of ego state using functional labels, it was referred to as a functional model as though it was a model of functions. I believe this phenomenon was an example of the "linguistic slippage" referred to by Stewart (1992 p 124) when highlighting the historical confusions over ego state definition.

It is valid and necessary to have models of ego state function in TA. The powerful characteristic of observability of the approach requires diagnostic models for categorising behaviours. What developed out of the confusion and lack of explicit differentiation between structure and function of ego states, however, was a model of functional descriptions of ego state categories that was then used for describing categories of behaviour.

**Figure 2.1. Traditional Model usually referred to as the 'Functional Ego State Model'**



What also has to be remembered is that the terms of the model were based on subjective assumptions rooted in a particular epoch and context. They were not empirically or theoretically derived. The assumptions express cultural and historical biases and distortions that rang true at the time (see section one above), and, importantly, have validity in terms of common human

pathology. They became part of the 'frozen image' of TA discussed above and so have helped to support any generalised view that TA is out of date. This, however, is the conceptual platform on which the formulation of my model is based and I will return to it in more detail in a subsequent section outlining the rationale for the creation of my model.

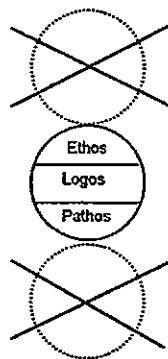
**Pitfall 3: Indecision over how to depict psychological integration (3-Part Model or Integrated Adult Model)**

The third pitfall is to remain undecided about whether to use a three or a one ego state diagram to depict the goal of psychological integration in TA. In effect, conceptually, it does not matter. Both ways of doing it are saying the same thing, namely that the fixations of the past, whether in Parent or Child, have been dealt with and the person is free to enjoy life fully without suffering from them. It is the metaphorical dynamic that is different. What is important to note is that this state of perfection is an unattainable ideal (Temple 1999). I believe that the reality of life offers a continuation of the process of integration in the direction of an ideal of autonomy.

Stewart (2001) portrays the two versions starkly polarised. They are both static and are based, as he says (page 143) on two different definitions of Parent, Adult and Child:

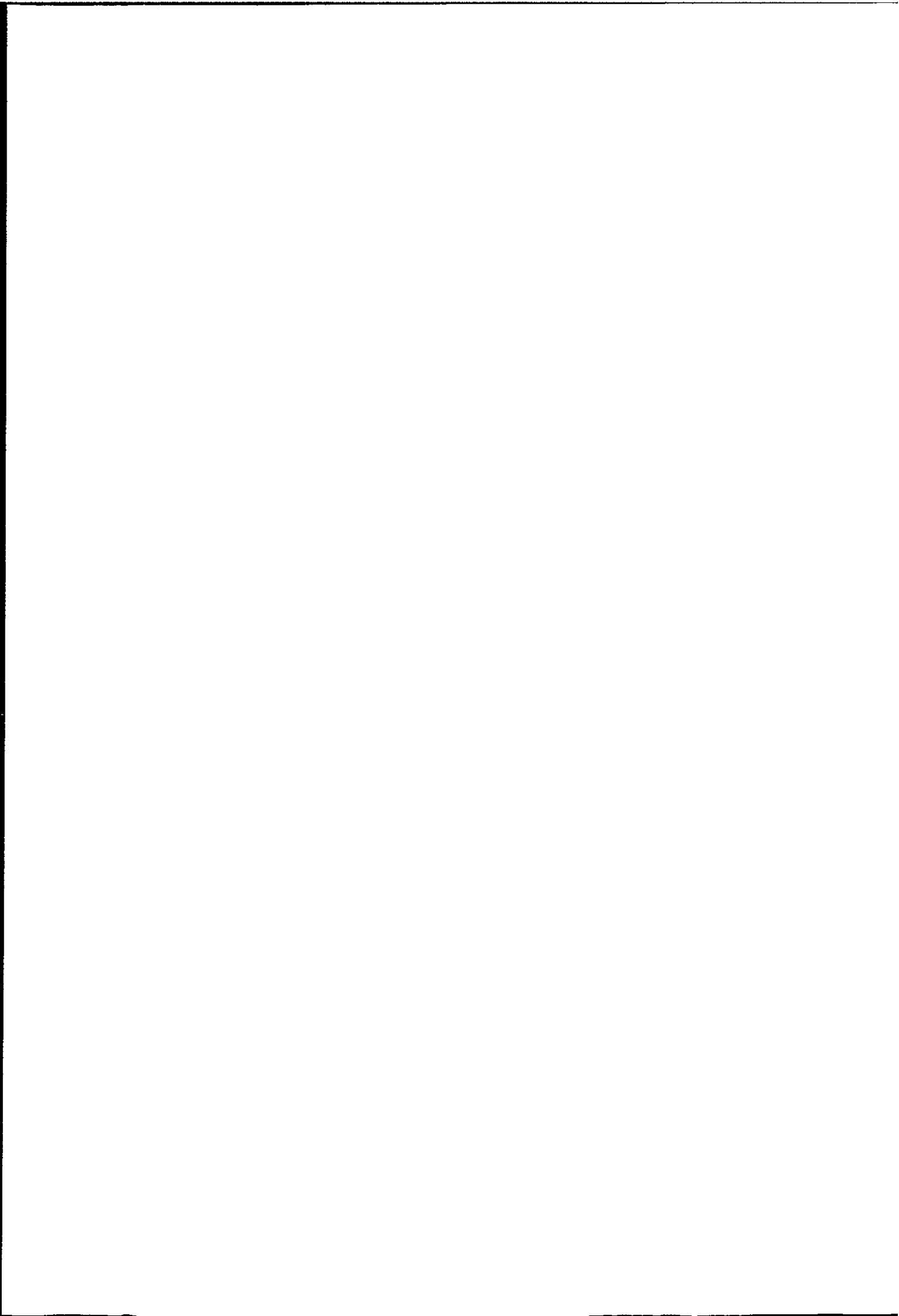
1. The definition of those who conceive of Parent and Child as consisting only of fixated or 'scripty' material has as the goal the total disposal of both Parent and Child categories of ego state. The remaining Integrated Adult ego state is shown divided into three areas of integrated material reflecting the original three ego state categories: Ethos (Parent), Logos (Adult) and Pathos (Child).

**Figure 2.2. "Totally Cured Person Version 1" (Stewart 2001 p 143, Diagram 5A)**



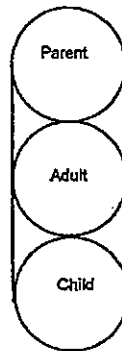
2. The definition of those who conceive of Parent as consisting of all we took in from Parental others, positive and negative, and Child as consisting of all of past experience, both scripty and autonomous, has as the aim for 'cure' updated and sorted out Parent and Child categories of





ego state. The unwanted material is what is disposed of; the valuable is retained so that the notion of integration is depicted by an encapsulation round all three ego state circles.

**Figure 2.3. "Totally Cured Person Version 2" (Stewart 2001 p 144, Diagram 5B)**



This depiction is actually the same as the basic first order structural diagram of ego states (Berne 1961), so the significance of this as a diagram of the 'cured' state would have to be achieved by explanation that the circles are now positively oriented to an integrated autonomy.

I think that both of these models miss out a necessary indication of the ongoing human dynamic of integration. A version resting on the development of the theory through the 1980s and 1990s (Trautman & Erskine 1981, Clarkson & Gilbert 1988, Gilbert 1996 and others) holds that the input into Parent and Child is lifelong. Likewise lifelong are the twin integrative psychic activities of decontamination of Adult of unhelpful Parental and Child influences and integration into Adult from Parent and Child of life-enhancing material (Erskine & Moursund 1988). There is thus a complex ongoing process of change creating an ever-developing maturity of personhood (Temple 1999). Claude Steiner (2000) referred to his experience of a meditation-induced state of complete upliftedness as being close to his imagining of "pure Adult". He thought of this state as "ego-fullness" (page 3).

In order to convey the nature of this ongoing human dynamic, two things are essential: a) to use the term 'Integrating Adult' rather than 'Integrated Adult', and b) to invent a diagram that attempts to depict the integrative processes described above (Temple 1999 p 165). Erskine (1997) comments on Berne's descriptions of the Adult ego state thus:

*"Berne (1961) contrasted the exteropsychic and archaeopsychic ego states with a neopsychic ego state (Adult) that accounts for and integrates: what is occurring moment-by-moment internally and externally; past experiences and their resulting effects; psychological influences and identifications with significant people in one's life.*

*This Adult ego state consists of current, age-related motor behaviour; emotional, cognitive and moral development; the ability to be creative and the capacity for full contactful engagement in meaningful relationships. This neopsychic state of the ego functions without intrapsychic control by an introjected or archaic ego". (page 133)*

Erskine is in full contact here with the original profound richness of Berne's conceptualisations, which are in fact consistent with much later findings of neurological and biological brain research (Gilbert 1996, Hine 1997). The time dimension factor is crucial conceptually and so is the fact of human development as an ongoing dynamic. Neither of Stewart's examples (2001) based on traditional TA literature conveys these matters, which are, of course difficult to diagram.

What is important for me to bear in mind is the maintenance of coherence and consistency in my choice of model for ego state depiction and human functioning categorisation in order to create an instrument with a valid and reliable theoretical TA foundation.

### **TA Development Since the 1970s**

Finally, to conclude this section on theoretical and contextual issues and influences in TA tradition, it is important to outline the development of these TA matters since the waning of the 1970s' mass popularity. The 1980s was a time of gradual realisation of what had happened. There was some yearning for the past. However, many practitioners worldwide continued to develop and enrich TA as a serious, in-depth psychology (Erskine & Zalzman 1979, Mellor 1980, Trautmann & Erskine 1981, Hohmuth & Gormly 1982, Ware 1983, Moiso 1985, Stewart & Joines 1987, Erskine 1988, Levin 1988, Clarkson & Fish 1988, Summerton 1988, Clarkson 1992). This period also included important works by educators and organisational specialists, for example (Illsley Clarke 1978, Hay 1992). English is the 'official' language of TA world wide, for instance in the TA Journal and for examination, hence these English language references. Writers in Europe and other continents have also contributed various volumes in their own languages. There was a recorded landmark round-table discussion on ego state theory in 1987 (Erskine, Clarkson, Goulding, Groder, Moiso 1988). The five eminent transactional analysts tackled the topic 'TA Theory: Past, Present and Future' in which the above issues were addressed and differences clarified. In 1991 a panel focussed on 'Ego States and the Self Concept' (Novey, Porter-Steele, Gobes & Massey 1993). Sometimes there was a tendency to create camps favouring either the Integrating Adult model or the three-part model as described above. Stewart (2001) points out the futility of claiming 'correctness' for any model and suggests instead that ego state models should be assessed on their usefulness for the task in hand and their conceptual coherence. Tilney (1999), writing about how to choose what is the 'right theory', points out the complexity of TA's position in terms of its joint focus on the intrapsychic and the interpersonal. He states that in maintaining this position where the two fields meet, the concept of the ego state has a key role. He suggests that it is the difficulty of inhabiting this position that fuels the succession of TAJ articles

about the nature of ego states and how to name, describe and explain them. He further suggests that it may be wise to define particular domains of TA use, e.g. psychotherapy, education, organisations etc, and apply the particular theoretical models that have been designed to be effective there.

The 1990s have seen important developments:

- There has been further focus on TA as an in-depth method of psychotherapy, with a powerful focus on the integrative approach of Erskine (1997) and others and a growing appreciation of the need to address the subject of the unconscious in TA (Clarkson 1992). Tilney (2000)

writes:

*"What is missing in transactional analysis is the sense of coherent patterns and structures representing primitive and archaic modes of thought that provide a counterpoint to conscious processes and profoundly affect them. It is my belief that unconscious process is such an important and useful concept that it needs to form part of mainstream thinking (and teaching) in TA training from the beginning"* (page 3).

This is a very different focus from the behavioural change style of the 1960s and 1970s but picks up interests and concerns of Eric Berne himself in the 1950s before he launched fully into developing TA and left the psychoanalytical fold.

- There has been a concern to recognise, appreciate and develop TA in fields other than psychotherapy, epitomised by the giving of the Eric Berne Memorial Award 1995 to Jean Illsley Clarke for her work applying TA in parent education.
- There are ongoing efforts to update and improve systems of professional requirements and examination processes to reflect the above.
- There are negotiations in many countries concerning formal recognition of TA as a psychological modality in psychotherapy and other fields.

For the new millennium there are calls for clarity and harmonisation of theoretical definition amongst practitioners. There are urgent calls for more TA-based research. In announcing the upcoming TA Journal Special Edition to be devoted to the topic of 'core concepts', Tilney (2001) draws attention to the dangers of creeds and dictionaries. He suggests that Stewart's (2001) powerful demand for the clarification of TA terminology, to maximise coherence of theoretical description and explanation, could be more useful than any exercise bent on deciding which models are 'right or wrong'. The previous year Tilney (2000) had written, *"It is important that we honour our core values but also that we give time and space for authentic knowing to develop and that we go on asking questions that may lead us on to the next level of knowing and understanding."* (page 3).

I find this an exciting stage of TA's history and regard my project to be part of it. As well as continuing to honour the TA core values of respect and openness, I think it vital that hand in hand with the developments as outlined above goes a continuing practice of using "*straightforward words to describe rigorous and profound theory*" (Stewart 1992 p 149). I too believe that words of clarity and simplicity, used appropriately, do "*provide a handle by which the theory can be grasped and used*" (Stewart 1992 p 149). Such terms must, however, be used with precision to denote theoretical concepts that are clearly differentiated, coherent and consistent.

## **TA RESEARCH AND DILEMMAS OF DEFINITION**

In August 2000, Marco Sambin and Diego Rocco gave a presentation of their overview of TA research articles in the TAJ between 1970 and 2000 at an international TA conference. They divided this time span into three decades and classified the articles into a) Theory, b) Conceptual Tools, c) Use of the Tool in Professional Practice and d) Measurement Instruments. My focus of interest is on the last category in order to give an idea of the antecedents to my project:

- Of all the research articles, those concerning measurement constituted the following proportions by decade: 1970s 8.6%, 1980s 10.4% and 1990s 4.6%. It seems as though the interest in measurement has waned considerably.
- The most used TA concept in terms of measurement over the whole period was ego states.
- The type of instrument most utilised was the checklist, which also became increasingly popular over time as more researchers made use of the ready-made Adjective Check List (Gough & Heilbrun 1965).
- Statistical complexity also increased over time, presumably with the advent of computerised statistical packages.

A survey of the literature reveals that the main context for the researches has been clinical. A number of studies, however, have an educational or organisational context. The research questions fall into the following main categories:

- Are ego states recognisable? (Thomson 1972, Falkowski, Ben-Tovin & Bland 1980).
- How to identify ego states? (Hurley & Porter 1967, Thomson 1972, Williams & Williams 1980).
- How to measure ego states? (Price 1975, Butler 1976, Graham 1976, Heyer 1979, Brennan & McClenaghan 1978).
- What do particular measurements mean in relation to other criteria? (Thorne & Faro 1980, Roark & Vlahos 1983).

In addition, in the educational arena in particular, some questions have been more open-ended, of the 'What happens if—?' variety, (Fine, Covell & Tracy 1978, Flaro 1979, Fetsh & Sprinkle 1982, Schill & Wang 1983).

### **Limitations in TA Research**

Limitations of the research seem mainly to be a consequence of the issues and pitfalls described in previous sections of this chapter.

- a) Frequently there was confusion between structure and function. Researchers used functional descriptions of ego states as their constructs to measure and then called them ego states, e.g. (Thomson 1972, Price 1973, Heyer 1979). This inevitably called into question the nature of what was being measured and cast doubt on any claims made. With respect to this issue it is important to note the case of Dusay's (1972) egograms, which he claimed measure ego state 'energy' using an ipsative procedure. His 'constancy hypothesis', which assumes a fixed amount of psychic energy, states that putting more energy into one type of ego state will reduce the energy in another type. Egogram construction has been shown in clinical practice to be an effective exercise for helping people make positive changes in their lives. The intuitively based hypothesis seems to work (Williams & Williams 1980); this is undisputed. However, what Dusay claimed, and what subsequent researchers measured, did not match conceptually. When researchers tested this hypothesis using the functional terms of the egograms as constructs to be measured, the hypothesis was not supported (Kenney & Lyons 1979, Franklin 1979). I think that the answer lies in the ambivalence of the construct/concept definitions discussed above. Dusay (1977) says:

*"The egogram is a visual symbol that represents the total personality of any human being by separating it into its various aspects and clearly showing which parts are "weak" and which are "strong" (page xv).*

Dusay's claim is therefore about ego states (categorised by function) not about ego state functions. It is a simple and logical claim; if a person is operating more in one state he or she will be operating less in another. The egogram is a subjective and intuitive measurement. Accuracy is borne out by observation. Misawa (1981) calls it using *"subjective judgement of underlying ego image"* (page 25). Dusay used the set of traditional TA five functional descriptions of ego state manifestations as a short hand for what he meant as particular categories of ego state. This is the same linguistic/conceptual slippage identified by Stewart (1992) and referred to above. When the researchers operationalised this set into behavioural indicators/test items, then they were measuring objectively a set of

five types of functioning, not five types of ego state. It is not surprising, therefore, that the results did not demonstrate the inverse scorings that would have 'proved' Dusay's hypothesis.

- b) Constructs for measurement were complex. The traditional five functional descriptions usually used in ego state measurement, with the difficulties outlined above, also have another important characteristic in terms of research. They are complex constructs, and are therefore not suitable for reliable measurement. As Neuman (1994) points out:

*"Each measure should indicate one and only one concept, otherwise it is impossible to determine which concept is being 'indicated'" (page 129).*

Various studies used different combinations of the functional descriptions. For instance Misawa (1981) in her study of nursery nurses' ego states in Japan, used all five as in Dusay's egograms, devising questionnaire items based on a *"bundle of statements gathered from the literature on TA theory"* (page 25). Kenney and Lyons (1980) in their study using an observation schedule to monitor changes in a teacher/pupil dyad, used only three of the five. Evidence from examination of some TA instrument documentation shows that the constructs used are far from uni-conceptual, for example (Heyer 1977, Misawa 1981, Doelker & Griffiths 1984). The complexity of concepts in the constructs is illustrated by some of the test items, for example:

- Adapted Child (Heyer 1977), items to test this construct include, *"I often feel sad, depressed and gloomy"* and *"I have a low boiling point, I lose my temper a lot"* (page 86).
- Nurturing Parent (Misawa 1981), items to be checked include both *"I notice the good rather than the bad in children"* and *"I am meddling"* (page 30).

Claims for any results would not, therefore, stand up to methodological scrutiny.

- c) Constructs manifested cultural and historical stereotyping. The constructs used, as well as having the above disadvantages from the research methodology perspective in terms of in-built error, also embodied the stereotyping of the overly simplified TA ego state models of the 1960s and 1970s discussed earlier. These stereotypes were steadily recycled and reinforced as researchers used and reused the same descriptions. Doelker & Griffiths (1984 p 150), for instance, used Dolliver & Mixon's (1977) definitions, which they in turn credit to James & Jongeward (1971).

**Table 2.2. Doelker & Griffiths' Definitions (1984) Used to Categorise Potential Test Items**

Category	Definition
Nurturing Parent	"This person is sympathetic, nurturant towards others, and oriented towards promoting growth in others".
Critical Parent	"A person who is prejudicial, moralizing, punitive and judgmental who may seem bossy or know-it-all".
Adult	"An adaptable, organised, non-prejudicial and rational person who likes to gather facts, estimate probabilities and solve problems".
Free Child	"This person is curious, impulsive, uncensored, self-centered, sensuous, affectionate and playful, and may become fearful and aggressive".
Adapted Child	"This is a compliant, inhibited, unassertive person who may withdraw or procrastinate, who tries to conform and tries to please others".

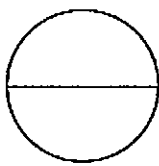
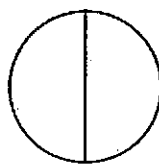
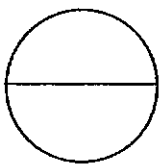
It can be seen from this example that the functional descriptions of ego states here are also confused with personality types. This dynamic created a self-reinforcing cycle of TA community agreement on the set of stereotypes, which no doubt contributed to Stewart's (1992) assessment of TA's 'frozen image' discussed above. Many of the researchers cited commented that use of the instruments requires knowledge of TA. What is clear is that because of the simplified theoretical definitions used, only a superficial knowledge was required.

### **Research Using the Adjective Checklist**

A change came with the use of the Adjective Check List (ACL) (Gough & Heilbrun 1965). Initially Charles Schaefer (1976) devised a set of TA scales from the 300 word Check List using a taxonomy of his own that did not equate to the traditional set of five functional descriptions. The difference was that he took Parent, Adult and Child and divided them each into positive and negative 'functional descriptions'. The following table shows his taxonomy:



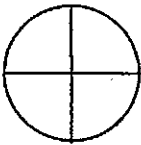
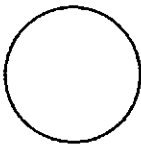
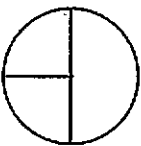
**Table 2.3. Schaefer's (1976) TA Scales for the Adjective Check List**

Category/Term	Diagram	Description
<b>Self-depreciating Parent</b>  <b>Self-enhancing Parent</b>		bossy, fault-finding, self-punishing  considerate, cooperative, mannerly
<b>Rational Adult</b> reasonable, autonomous, effective, reality-testing		<b>Irrational Adult</b> unrealistic, defensive, argumentative
<b>Positive Child</b>  <b>Difficult Child</b>		curious, open-to-experience, spontaneous, imaginative  fearful, impulsive, dependent

As Schaefer did not include concepts of nurturing or adaptation, these scales would have measured a quite different profile from the traditional TA set of definitions. In his methodology, three judges were used to validate the scales by choosing 15 positive and 15 negative adjectives from the ACL to describe "adaptive and maladaptive" aspects of each category of ego state. The 90 adjectives on which there was total agreement by the judges became Schaefer's ACL TA scales.

Some years later Williams & Williams (1980) also developed a set of TA scales for the ACL. They used 15 expert judges and a range of statistical analyses with the intention of producing objectively derived scales. One of the things demonstrated by Williams & Williams' results was the nature of the conceptual bias usually found in ways of describing the traditional set of ego state functions. This can be demonstrated by comparing the lists of chosen adjectives for the five constructs, see Table 2.5. below, with lists devised differently by two other researchers in 1980 who also used the ACL. Thorne and Faro (1980) based their TA instrument, the Ego State Scale (ESS), not on the same traditional five functional descriptions but on a set of eight as proposed by Taibi Kahler (1977). Kahler's model includes eight categories by dividing Critical Parent, Nurturing Parent and Adapted Child into positive and negative manifestations, leaving just Adult and Free Child as single constructs. Thorne and Faro summarise thus:

**Table 2.4. Thome & Faro (1980) Summary of Model Terms**

Diagram	Category/Term	Description
	Not OK Critical Parent	= Persecuting Parent e.g. "You're stupid!"
	Not OK Nurturing Parent	= Rescuing Parent e.g. "Try hard for me honey!"
	OK Critical Parent	= Protecting Parent e.g. "Stop! Don't kill yourself!"
	OK Nurturing Parent	= Permission-giving Parent e.g. "It's OK to live!"
	Adult	= Like a computer, impartial to feelings and prejudice
	Not OK Adapted Child	= Either anxious/fearful or rebellious – in response to Not OK Critical Parent
	OK Adapted Child	= Going along with protective messages – in response to OK Nurturing Parent
	Free Child	= Responding to messages from OK Nurturing Parent; expressive and spontaneous

What this model allows is some balancing of constructs according to their logical meaning.

Conceptualisation of seven of the eight constructs is simplified (Neuman 1994) so that operationalisation of these can be achieved with much less ambiguity, thus making validity and reliability of results more possible. The following table is arranged to show comparison between the descriptors chosen by Williams & Williams for their traditional five ego state descriptions and those chosen by Thorne & Faro for their set of eight. The lists show the 13 ACL adjectives gaining mean ratings of at least 3.5 in their particular category in Williams & Williams' study.

**Table 2.5. Comparison of Ego State Descriptors (Williams & Williams 1980, Thorne & Faro 1980)**

Williams & Williams Critical Parent (CP)	Thorne & Faro CP		Williams & Williams Nurturing Parent (NP)	Thorne & Faro NP		Williams & Williams Adult	Thorne & Faro	Williams & Williams Free Child	Thorne & Faro	Williams & Williams Adapted Child (AC)	Thorne & Faro AC	
	Pos	Neg		Pos	Neg						Pos	Neg
autocratic			affectionate	√		alert	√	adventurous	√	anxious		
bossy		√	considerate	√		capable	√	affectionate		apathetic		√
demanding		√	forgiving	√		clear-thinking	√	artistic	√	argumentative		-CP
dominant		√	generous	√		efficient	√	energetic	√	arrogant		-CP
fault-finding		√	gentle	√		fair-minded	√	enthusiastic	√	awkward		
forceful	√		helpful	√		logical	√	excitable		complaining		
intolerant		√	kind	√		methodical	√	humorous	√	confused		
nagging		√	praising	√		organized	√	imaginative	√	defensive		√
opinionated		√	sympathetic	√		precise	√	natural	√	dependent		
prejudiced		√	tolerant	√		rational	√	pleasure-seeking		hurried		
rigid		√	understanding	√		realistic	√	sexy	√	inhibited		√
severe			unselfish	√		reasonable	√	spontaneous	√	moody		√
stern		√	warm	√		unemotional	√	uninhibited	√	nervous		√

The bias demonstrated is an example of that found throughout the traditional TA literature. Critical Parent (sometimes called Controlling Parent) (CP) is a complex construct with strong negative connotations. Note the evidence from the table that the Williams & Williams complex construct correlates almost completely with the single negative construct of the CP of Thorne & Faro. Nurturing Parent (NP), in contrast, has strong positive connotations. Again the complex construct of NP correlates only with the single positive construct of Thorne & Faro. Adapted Child (AC) has strong negative connotations. Here again the complex construct AC correlates with Thorne & Faro's negative single construct, though the matter is clearly more complex in this instance, see also page 39. What is more, Williams & Williams observe that "*There is a considerable body of common understanding among TA experts with regard to their conceptualization of ego states*" (page 126). They refer to the fact that many TA practitioners of the time recognised and used the biased model.

Thorne & Faro (1980), using their model of eight more precisely differentiated constructs, and their ACL based scales, were able to demonstrate interesting links between some positive and negative manifestations of ego states and aspects of psychopathology. Their results cast new light on some of the assumptions of the traditional five-part model, e.g. that Critical Parent is generally negative and Nurturing Parent is generally positive. For instance, they showed that Positive Critical Parent was more closely correlated with reduced pathology than Positive Nurturing Parent, and that Negative Nurturing Parent was more closely correlated with raised levels of pathology than Negative Critical Parent (p 51). Such a result had been impossible previously because of the lack of differentiation of constructs.

There have since been more ACL-based studies, for example Williams, Watson, Walter & Williams (1983), and Emerson, Bertoch & Checketts (1994). Finally, Gloria Noriega-Gayol (1997) conducted clinical research into ego state boundary problems for which she devised a specialised inventory to identify contaminations, lesions, laxity and exclusions in ego states. This study did not use ego state measurement as such.

From this account, it can be seen that the issues identified in previous sections have seriously compromised the effectiveness and credibility of some TA research in terms of faulty construct definition and the operationalisation of complex constructs with hidden bias of meaning. There have also, however, been a range of studies, especially in the educational field, for example, Arnold & Simpson (1975), Amundson & Swatzky (1976), Fine, Covell & Tracy (1978), that have provided qualitative evidence of the efficacy of TA concepts in practice.

What emerges from this review is that, in order for me to produce a TA based instrument with theoretical and rational legitimacy, one that will stand up to psychometric and methodological scrutiny, it will be necessary to take into account the implications from the range of issues identified here and avoid the pitfalls specified in this section.

## **THE DEVELOPMENT OF TEMPLE'S FUNCTIONAL FLUENCY MODEL.**

### **Key Influences**

Research using TA ego states, in spite of the TA ACL scales, waned in the 1990s. Diversion of energy into clarification of theory (Loria 1988) and other articles collected in a special ego state edition of the TA Journal in January 1988 may have been partly responsible for causing inertia in this regard by pointing up the research issues as discussed above. Kuhn (1962) argues that the dominant social paradigm affects the energy for change and development of ideas, forming an orthodoxy that works against radical or different ideas being accepted. Then scientific effort and education tends to support established thinking. Apart from Noriega-Gayol (1997), in-depth articles with a focus on ego state theory have not been linked to a research project as such, for example Drego (1993), Wagner (1994), Gilbert (1996), Oller-Vallejo (1997), Hine (1997), Novey (1999).

These theoretical and research concerns of the 1980s and 1990s formed the backdrop for my growing desire to create a functional model free of the conceptual difficulties of the TA tradition. Then, in response to professional demand, I decided to create a TA based psychometric instrument as outlined in the introduction. My overall motivation was primarily educational. Initially I was desirous of creating a way to teach people about ego states and how to understand the concepts that would avoid the learning pitfalls of the past. A key inspiration for my formulations came from Mary Cox in 1988 at a presentation in which she demonstrated a way to depict both structural and functional aspects of ego state theory simultaneously, in order to show both the crucial conceptual connections and the necessary differentiations (Cox 1999). I experimented over some years with different ways to diagram and explain both structure and function of ego states. The criteria for my formulations were as follows:

- To portray the nature of Berne's definitions of ego states.
- To portray the relationship of the two aspects of TA theory: the intrapsychic and the interpersonal.
- To make clear the difference of time dimension between Adult and both Parent and Child.
- To convey profundity of concept with simplicity of exposition.

- To represent the functional categories of ego state manifestation in a logical and balanced way that would correlate with other theories and research about human functioning (in particular with respect to parenting and child development).
- To redress traditional TA theoretical bias in order to meet educational goals.
- To maintain Cox's (1999) consistency of link and differentiation between structure and function.
- To demonstrate a way to reinforce the positive while taking account of the negative in the best TA tradition (Karpman 1972, Porter 1975).

By way of introduction to the process, it is important to stress that the current ideas are the result of many years of experiment and consultation and were arrived at by degrees. The current version is the one presented and I expect that it will need further refinement, maybe as a result of the project in hand. Several ideas have been particularly helpful in the process:

- The concept of the manifestation of the Integrating Adult (Erskine 1988, 1997, Temple 1999), in particular the importance of the notion of the continuity of the ongoing processes of decontamination of Adult and integration into Adult of valuable material from Parent and Child.
- The concept of 'fluctors' and 'structors' as described by Dr Peter Mitchell of the Glynn Research Institute in Cornwall, who was awarded the Nobel Prize for chemistry for his work on the energy systems of living cells. In a conversation with Louis Wolpert the biologist, in 1989, he explained that whereas a 'structor' is an object such as a teacup, a 'fluctor' is a system in constant change, such as a river or a living thing (or an ego state). Fluctors' processes of change are a constant flowing, not a set of discrete stages, therefore no identified stage is a separate state. Explanation of this idea by Tony Tilney (personal communication 2000) brought into focus for me my conviction that any diagram of someone's particular behavioural manifestations of ego states would be but a snapshot of an ever-flowing process.
- Lloyd Flaro's (1979) term "*ego shiftability*" (page 198) was particularly apt. Flaro emphasised the value of flexibility of response in the classroom and showed how teachers who can "*orchestrate*" a variety of ways of responding to situations are more facilitative of pupils' security and learning.

I connected all these ideas with the complexity of the human condition and how to describe it. I felt a need for a related term that would apply specifically to the functioning of ego states. Very aware, like Flaro, of the importance educationally of the relationship between teacher and learner in terms of its facilitative qualities (Aspy & Roebuck 1973), and that in order to relate in facilitative ways a person needs flexibility of response, congruence and empathy (Rogers 1951), I devised the term

'Functional Fluency' to denote this complex attribute (Temple 1999 p 164). I imagined that a profile of behavioural manifestations of ego states could be diagrammed to depict this notion of Integrating Adult in action. Functional Fluency also combines the subtly different concepts of 'response-ability', that I take to be the conscious and aware responsiveness of Adult as opposed to the automatic reactions of Parent or Child, and 'ego shiftability', the more specifically behavioural option-choosing in Adult.

### **Characteristics of the Functional Fluency Model**

These notions of flexibility in human responding require to be balanced. My sense of the delicacy of balance involved in the free-flowing interactions of the well integrated person was aptly expressed by Gregory Bateson just before his death in 1978. In a conversation with Daniel Goleman (1997) he described the connectedness of the parts of complex systems that creates from those separate parts a coherent and recognisable whole:

*"The pattern which connects is a 'metapattern', a pattern of patterns. More often than not we fail to see it. With the exception of music, we have been trained to think of patterns as fixed affairs. The truth is that the right way to begin to think about the pattern which connects is as a dance of interacting parts, secondarily pegged down by various sorts of physical limits and by habits, and by the naming of states and component entities" (page 7).*

The idea that various aspects of the way a person functions could be recognised, named, described and even explained could seem an impossible task. A coherent model to give a framework for understanding and making sense was needed. The model I developed could be considered from two quite different perspectives. On the one hand the model is a direct descendant of the traditional TA 'functional ego state' models and can be recognised as such. On the other hand it can be considered as a new model of basic human functioning completely separate from TA ego state theory. The model delineates crucial aspects of human existence, namely growing up, surviving and raising the next generation. These are most basic matters, more primitive than personality factors or traits, and intrinsic to the human condition (Gopnik, Meltzoff & Kuhl 1999).

My purposes related to these two perspectives. Firstly I wanted to design an updated version of the TA model of ego state function that would be suitable for use in educational contexts, and that would also have potential use as a way to introduce ego state theory. It would function as an instructional device. Secondly I wanted to produce a psychometric instrument for raising self-awareness that would draw on the riches of the TA approach to understanding human interaction, without any need to know TA ego state theory in advance. Conceptually it would stand separately from ego states. I was concerned that my model should provide a taxonomy of human functioning

that would enable open-ended ways of identifying with the various categories in order to illuminate the nature of someone's unique behavioural profile. This is qualitatively different from a typological model designed to identify which type or category someone belongs to, in order to illuminate their type of behavioural profile (Totton & Jacobs 2001). The latter suggests something more fixed than I had in mind. I wanted to produce an instrument that would provide something more in the nature of the 'snapshot' of someone's flow of behavioural characteristics, referred to above.

The issue of terminology was of the utmost importance, and something difficult to decide on fully in advance of the Pilot Study. Throughout the various studies in this project, therefore, a mixture of traditional TA and new terms was used. Attention was paid to the potential need for change in this matter.

It was crucial that the working model consisted of constructs each indicating one clear concept (Neuman 1994). In order to achieve this from the three broad categories of functioning mentioned above, namely upbringing, growing up and surviving, I used Kelly's (1963) personal construct theory, in particular the way it offers of construing ways of construing (Bannister & Fransella 1971). There were three stages:

**Table 2.6. Stages of Functional Fluency Model Construction, in 3 Levels**

Level 1. Comprehensive Construct Level: Three Categories of Functioning

<b>UPBRINGING</b> Manifestation of authority	<b>SOCIAL RESPONSIBILITY</b>	This includes grown-up responsibility for self; parental responsibility; professional responsibility for others; any role of being in charge of people
<b>SURVIVAL</b> 'Withitness' & being grounded in the 'here-and-now'.	<b>REALITY ASSESSMENT</b>	The moment by moment processing of stimuli, sensory, cognitive and emotional, including both reception and organisation, as in Piagetian assimilation & accommodation.
<b>GROWING UP</b> To do with identity & expression of self.	<b>SELF ACTUALISATION</b>	The impacting on the environment of the person's unique identity at whatever age and stage.

Level 2. Subordinate Construct Level: Five Elements of Functioning

<b>SOCIAL RESPONSIBILITY</b> <b>CONTROL</b> <b>CARE</b>
<b>REALITY ASSESSMENT</b> <b>ACCOUNTING</b>
<b>SELF-ACTUALISATION</b> <b>SOCIALISED</b> <b>NATURAL</b> <b>SELF</b> <b>SELF</b>

Level 3. Further Subordinate Construct Level: Nine Behavioural Modes

<b>NEGATIVE CONTROL</b>	<b>NEGATIVE CARE</b>
<b>POSITIVE CONTROL</b>	<b>POSITIVE CARE</b>
<b>ACCOUNTING</b>	
<b>POSITIVE SOCIALISED</b>	<b>POSITIVE NATURAL</b>
<b>NEGATIVE SOCIALISED</b>	<b>NEGATIVE NATURAL</b>

It can be seen that REALITY ASSESSMENT/ACCOUNTING has remained a single construct through the levels. It would be possible to divide it, for example into 'input' and 'output' at Level 2. Drego (1979) does this, as shown in her second order behavioural diagram (p 53) in which she uses the terms 'photographic' and 'combining' for two such elements and also divides them into positive and negative aspects, thus creating a twelve-part model. An intuitive decision was made to leave this category undivided. Reflection identified two main strands of rationale, however. The first was a desire to continue the TA traditional pattern while building in new ideas. The second was that at the second level of five elements, I wanted to operationalise a distinction between the nature of the central element and the other four elements. The four elements in their two pairs would be scored on a positive/negative polarity (see Level 3). I considered that ACCOUNTING as a whole and single construct would be better scored on a simple 'more/less' basis. This would have a pragmatic advantage of keeping the test shorter with nine constructs to measure rather than twelve. It would also have the theoretical advantage of a clear focus on the importance of the overall concept of ACCOUNTING in terms of here-and-now responsiveness.

The creation of the term ACCOUNTING for the behavioural manifestation of the functional category of Reality Assessment was a crucial point in the development of the model. ACCOUNTING Mode for me was the behavioural evidence of this important aspect of the Integrating Adult ego state (Temple 1999). I held that the key to some of the ongoing confusion between structural and functional models of ego states was the lack of such a behavioural term, so that the word 'Adult' was used in both types of model. In functional models, whereas Parent and Child had functionally descriptive words added, e.g. controlling and adapted, the term Adult stayed the same undescribed word. This is very obvious from the set of diagrams presented by Hohmuth and Gormly (1982) in their review of the literature at that time. I introduced ACCOUNTING as the necessary and missing term in this context. Accounting is, however, a familiar TA concept. Much



of the time it remains invisible because of the emphasis on diagnosis of pathology in psychotherapeutic TA practice, with the familiar use of the term discounting in the analysis of ego states, transactions, games and scripts. Discounting is "*an internal mechanism which involves a person minimising or ignoring some aspect of self, others or the reality situation*" (Schiff et al. 1975 p 14). The logic of using the term ACCOUNTING to mean the opposite is clear.

The notion of accounting is also in common usage, e.g. to account for a factor, or to take a factor into account. What is new, therefore, is not at all extraordinary. What I am saying is that in my model, when someone is in his or her Adult ego state, he or she will be using here and now ACCOUNTING to assess reality. I believe this is the basis for Berne's comment (1964 p 186) that it is "*the Adult ego state that makes survival possible*". This is consistent with his earlier statement (Berne 1961),

*"The psychoanalytical ego has reality testing as one of its principle functions. The Adult ego state of transactional analysis is described as a state of mind focussed on data processing and probability estimating."* (page 296).

In terms of ego state theory, it follows also that when in a Parent ego state, the person will be using a borrowed ACCOUNTING Mode to assess the reality of the moment. Likewise in a Child ego state the person will be ACCOUNTING in a less mature way, the way he or she once did at the developmental stage of that ego state. This way of thinking provides another perspective from which to address issues of discounting. From an educational standpoint, what is vital to me is a means to focus on desired behaviours in order to promote and reinforce them. The aim is to facilitate appropriate accounting of reality. Educationally this has a higher priority for me than teaching how to identify discounting processes.

Other important conceptual shifts away from the traditional TA models of ego state function are at Level 2, the Five Elements of Functioning level, see diagrams above. The bases for these shifts are both linguistic and conceptual.

- a) CONTROL at Level 2 is used in a British rather than an American sense, thus reducing the inevitable negativity that traditionally has been associated with it in TA. The notion of control is used more to denote 'mastery' than 'limitation', e.g. to be in control of an aircraft. At Level 3 it is then logical to use two further subordinate constructs, one positive and one negative, to express separately two qualitatively different aspects of control.
- b) CARE at Level 2 is a term that has not been used traditionally in TA. At Level 2, CARE is needed to equate in generality of construct with CONTROL. Then, in a matching and balanced way, it provides the means to have two further subordinate constructs at Level 3, one positive

and one negative, to express separately two different aspects of care. (This means that the more specific term NURTURING, which traditionally stood opposite CONTROL, is released for the construct of positive care at Level 3.)

These two shifts set straight the previously built-in bias and distortion of having control assumed to be negative and nurture assumed to be positive, as evidenced by the majority of examples provided in the literature, cited in the previous section. The traditional TA typology did not provide for the concept vital for human health and endeavour, namely 'positive control'. Sometimes practitioners explained that Controlling Parent included 'positive control'; sometimes they assumed that any sort of positive parenting belonged in Nurturing Parent. There were a few exceptions, e.g. Taibi Kahler (1977), Thorne and Faro (1980). Until the writings of Jean Illsley Clarke (1978), in which she clearly delineated and named her 'four ways of parenting', there was a lack of specific recognition in TA for the concept of positive control meaning the empowerment by authority that offers security, discipline and inspiration. Also unnamed and unrecognised, except as the Rescuer role in a model for TA game analysis, was the concept of negative caring with its unhealthy patterns of indulgence and lack of limits. This led to difficulties in differentiation between healthy care and compassion (Level 3 positive care) on the one hand, and damaging over-tolerance (Level 3 negative care) on the other. Thorne and Faro (1980), discussed above, showed in their study how necessary these distinctions were in order to identify which parental functions foster pathology and which foster health.

Linguistic and conceptual bases applied in similar ways to the shifts made in the Self Actualisation category, also at Level 2:

- a) The element 'NATURAL' in the traditional model had been assumed to be positive. In addition, 'Natural or Free Child' implied a certain type, exuberant and out-going (see examples in most of the literature cited in the section above). There was little recognition of temperamental differences, or that one person's uninhibited and uncensored behaviour might be very different from another's. This was an example of the cultural, social and historical stereotyping referred to on page 12. The factor of maturity was not accounted for. There was no differentiation between age-appropriate spontaneity and creativity and the impulsive, egocentric self-expression that is evidence of immaturity. Traditionally, the latter was not specifically recognised. In my model, the element NATURAL SELF was therefore reframed neutrally at Level 2 to provide for both a positive and a negative subordinate construct at Level 3.

- b) The element ADAPTED in the traditional model was assumed to be negative and undesirable, consisting of defensive patterns learned as a result of inappropriate social demands. Positive styles of adaptation were not recognised or named even though, as social animals, positive ways of relating to others are some of the most important learnings humans do (Feeney, Christensen & Moravik 1996). Replacing ADAPTED with the more obviously neutral term SOCIALISED for this element provided, once again, for both a positive and a negative subordinate construct at Level 3.

Following these adjustments, at Level 3, the nine Modes of behaviour were ready for naming:

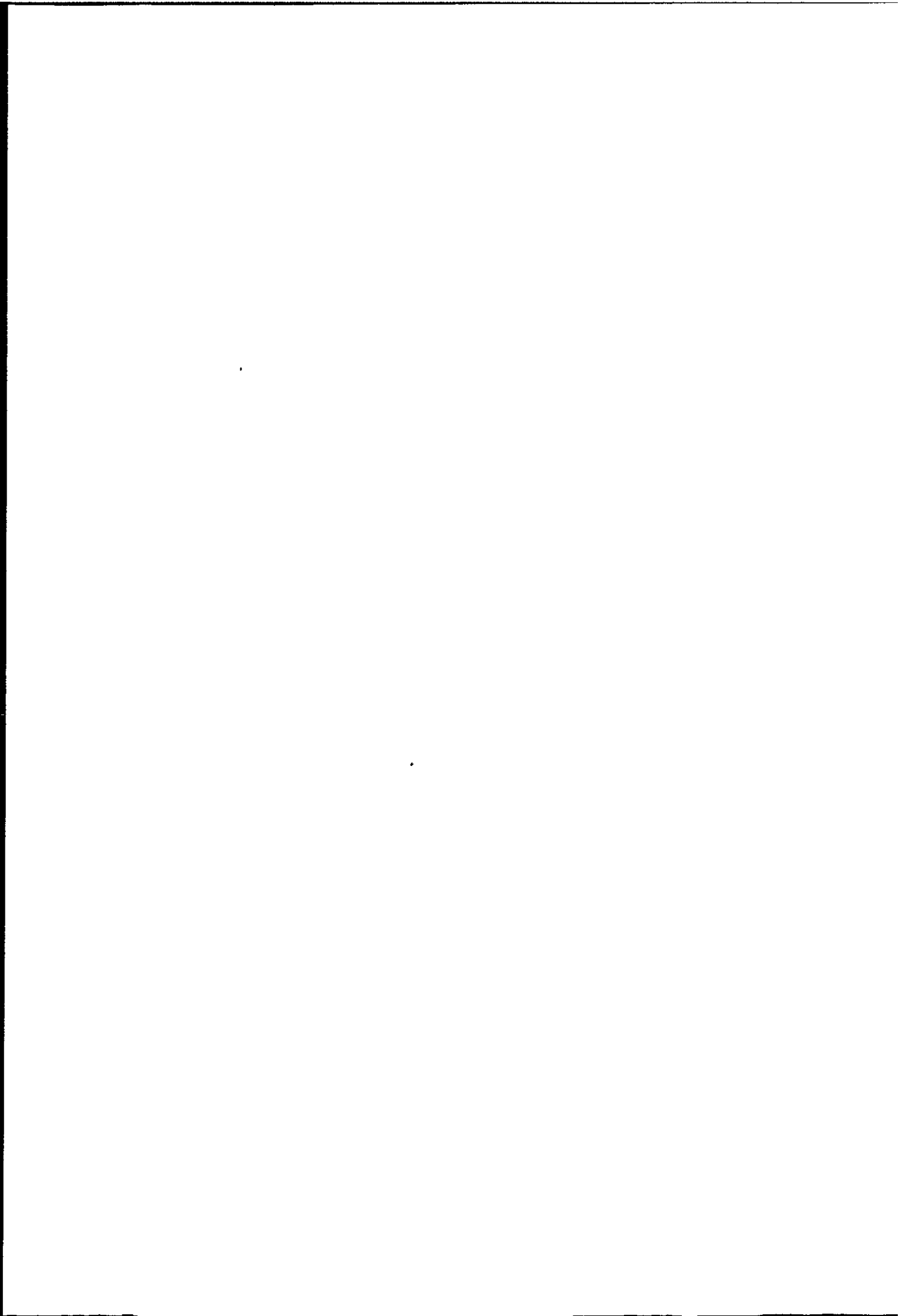
**Table 2.7. Level 3: The Nine Modes of Behaviour Named**

CRITICISING	MARSHMALLOWING
STRUCTURING	NURTURING
ACCOUNTING	
COOPERATIVE	SPONTANEOUS
COMPLIANT/ RESISTANT	IMMATURE

There were a variety of reasons and sources of inspiration for the set of names for the model:

#### **Social Responsibility Mode names**

The four Social Responsibility Mode names were taken from Illsley Clarke's (1978) comprehensive work in parent education. They were highly appropriate, familiar and I had already written about their use for my 'Being In Charge' model (Temple 1990). They were in a verbal form, helpful in terms of their behavioural usage, and the two that were in addition to the traditional model, STRUCTURING and MARSHMALLOWING, conveyed a depth of metaphorical meaning. Marshmallow had been used before in TA as a term for an insincere compliment, so there was no great inconsistency there. The term as a metaphor captures the dissonance of the concept of 'negative care'. It conveys something of the counterfeit or sickly nature of this concept, which is often caring of the wrong sort, at the wrong time, in the wrong amount and in the wrong way, so that the recipient, instead of benefiting, is damaged instead. NURTURING, by contrast, and by dictionary definition, benefits the recipients by meeting their needs for succour. STRUCTURING, on the other hand, conveys metaphorically the purposefulness of support in order for something to grow. STRUCTURING, as with Bruner's (1983) metaphor of adults' 'scaffolding' of children's learning, enables and empowers and then becomes rightly redundant. The term is one to do with



constructiveness and as such is in contrast to the destructiveness of CRITICISING which belittles, negates and puts down. The taxonomy provided by these four Modes compares very precisely with Baumrind's (1991) typology of parenting styles.

**Table 2.8. FFI Social Responsibility Terms Compared with Baumrind's Parenting Typology**

Illsley Clarke/Temple	Baumrind
Criticising	Authoritarian
Marshmallowing	Permissive
Structuring & Nurturing combined	Authoritative

Baumrind's typology was empirically derived from extensive longitudinal studies. She includes a fourth category, 'neglectful', essentially non-parenting, which doesn't fit into the comparison. Having four balanced Social Responsibility constructs at the same level of construing (Kelly 1963) means that they can be considered in either of two pairs, the two elemental pairs or the positive and negative pairs. This was impossible using the traditional TA five-part models, as the differentiation between positive and negative constructs was not explicit. As Mruk (1999) states, *"Attempting to derive statistics from distorted or disjointed data is doomed to lead to weak results"* (page 32).

It seemed that I was not the only TA practitioner to be seeking concepts of positive social responsibility at the end of the twentieth century. For instance, Ted Novey (1998), the editor of the TA Journal at the time, expressed a desire for recognition of some of the qualities that are inherent in the construct of STRUCTURING. In his column in *The Script*, "Whither Transactional Analysis" in August 1998, he wrote,

*"I would like to see some writing about self-discipline. To accomplish a goal, we need both creative thinking, decision-making and also a system of self-discipline. This problem comes up in the educational, counselling and therapy process over and over. Where does this self-discipline system come from? Can it be taught and learned? Is there a gene for self-discipline? Do some have it and some not – like a talent for music or maths?"* (page 2)

Carlo Moiso (1998) in his keynote address to the ITAA Conference also put emphasis on the need to address the social and political contexts of therapy, to focus on the responsibility and ethics of therapeutic endeavour and to enable the development of the whole person as a member of society. Jan Hennig (2001) drew our attention to the need to promote an integration of all aspects of personality expression when he wrote about German reunification and its difficulties: *"This could be a re-evaluation and clarification of the importance and value of the Adult"* (page 7).

These writers from Europe and America were expressing a need for a different focus from the traditional 'frozen image' of TA in which the controlling aspect of Parent was usually assumed to be unhelpful, negative and possibly tyrannical, something to be shunned or discarded. Instead they sought the positive attributes of STRUCTURING Mode to supply the support, security and discipline needed.

#### **Reality Assessment Mode name**

ACCOUNTING as a Mode term has already been discussed, but it is important here to note its metaphorical appropriateness. It carries, as do the Social Responsibility Modes, the potency of being both a verb and a noun. It also has two separate meanings, both of which are relevant and add richness to the term. As a verb it is about taking note and keeping a tally, while as a noun it is about creation of narrative. In this sense of construction of meaning (framing an account) of events there is again an appropriate Piagetian echo in this behavioural term for Reality Assessment.

#### **Self-Actualisation Mode names**

The four Self-Actualisation Mode names build on those used in the traditional TA model. They are more adjectival than those for the Social Responsibility category, as is appropriate for naming aspects of behavioural expression of the self rather than behavioural aspects of a functional role. The terms for the two Modes in the Natural element aim to point up the nature of these ways of expressing the unique originality of the person's *"inner resource pushing for health, autonomy and growth"* (Blackledge 1976 p 246). Age-appropriate manifestations are named SPONTANEOUS, and out-of-date manifestations are named IMMATURE. The positive and negative aspects here refer to a cultural construct concerning notions of what is considered mature or immature in terms of self-expression.

An example taken from a holiday incident illustrates precisely this matter of age-appropriateness and maturity. Waking up one morning in her motel room to the prospect of a lovely sunny day Marion opened the window onto the veranda. A moment later a little girl of about three years old pulled aside the curtain and peeped in, saying hallo and chatting about her baby brother and playing on the beach. Marion was delighted with her friendly visitor, who returned several times with more instalments of family news while Marion enjoyed her cup of tea in bed. The child was eventually gently encouraged by her mother to desist in order to leave Marion in peace to get dressed. The social interaction was appreciated by everyone concerned as rewarding and charming. Imagine the difference had the morning visitor been an adult behaving in the same way with similar uninhibited episodes of personal chatter uninvited and at that time of day. It is

likely that in this case the incident would be labelled a social intrusion lacking consideration for others, even evidence of pathology or severe learning difficulties. Using the Functional Fluency model, what at three years old is considered natural and age-appropriate behaviour, SPONTANEOUS, would be termed IMMATURE behaviour at an older stage.

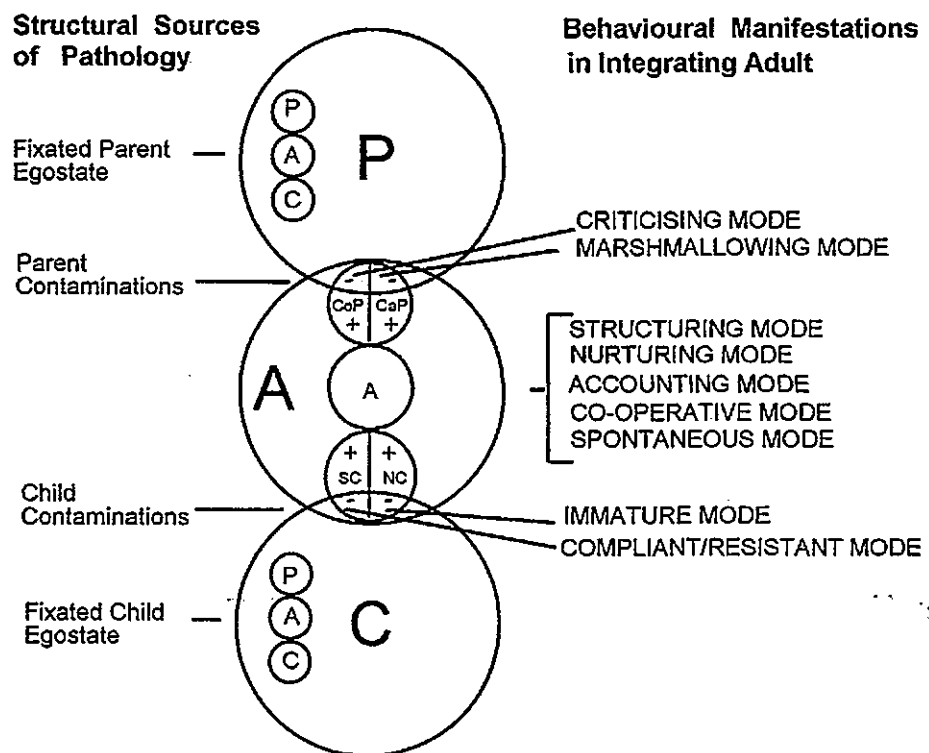
The terms for the two Modes in the Socialised element differentiate between behaviours that promote positive and rewarding social interaction and those that interfere with or detract from it. COOPERATIVE Mode is about social cooperation, without which the human race might not have survived (Liedloff 1975). This has often been a missing construct on traditional TA models, as pointed up in the previous section. It was surprising that Thorne and Faro (1980), cited above, did not find a positive correlation between their construct of 'Positive Adapted Child' and positive mental health. On examination of the ACL scale they used, however, it would seem that a reason might be that the scale seems to be more about 'compliance' than about 'cooperation', a vital distinction (Temple 1999). COOPERATION in my model denotes a potent assertiveness coupled with social skills of consideration for others and an ability to get along well with them in a respectful way from which all parties benefit. The negative Socialised Mode is a single construct at Level 2, but at Level 3, COMPLIANT/RESISTANT is the only Mode to have further conceptual differentiation explicitly built in. This is to portray the two main types of defensive strategies learned by people trying to cope in the face of overwhelming social domination (usually parental, in childhood). People learn to comply or to resist, hence the combination name for the Mode COMPLIANT/RESISTANT. It will be necessary to take this into account when constructing the measurement scale for this Mode. Two mini-scales will be needed. Important to note is that COMPLIANT/RESISTANT behaviours are the result of inappropriate social learning rather than the result of lack of social learning as in IMMATURE Mode.

The Self-Actualisation category of functioning requires the taking into account of ideas concerning the 'nature/nurture debate' (Thomas & Chess 1999, Gopnik, Meltzoff & Kuhl 1999) and the development of an intricate sense of self (Allen 2000). The maturational and developmental connections between these four Modes are clearly more complex than the connections and contrasts between the four Social Responsibility Modes, so it may not be appropriate to compare them in two pairs in the same way. It is expected that results from the data collection may throw further light on the nature of both sets of connections.

## Theoretical Linkage Between the Functional Fluency Model and Structural Ego State Models

This model of human functioning could be used for behavioural diagnosis in analysis of Adult and also Parent and Child ego states as explained by Cox (1999). From the educational perspective of the project in hand, the assumption is that the behavioural diagnosis is theoretically of an Adult ego state, using the Integrating Adult model. The logical relationship between the two separate models depicting on the one hand aspects of ego state structure, and on the other hand details of modes of human functioning can be illustrated by superimposing one model on the other (Temple 1999).

**Figure 2.4. Combination Diagram Structure and Function Shown Together (updated)**



This combined diagram emphasises the fact that structure and function of ego states, as of anything else, cannot be separated. What is necessary is clear differentiation of both concepts and models, with accurate and consistent terminology. In addition, awareness of the use and usefulness of reification and metaphor in actual practice is necessary if further confusion of theoretical implications is not to ensue.

The diagrammatic arrangement suggests that an explanation of the sources of negative Mode behaviours could be said to lie in the contaminated areas of the Adult. In this case, increasing integration, including decontamination and maturation, could be expected to be manifested by an increase in positive Modes of behaviour and a decrease in negative Modes of



behaviour. Evidence of this theoretical proposition may be provided in the results of the pilot study.

Exploration of the issues within TA history and theoretical development highlight the dilemma of choices of terminology. Continuation of use of the terms Parent, Adult and Child in a project concerning analysis of human behaviour rather than of ego states as such is to risk continuation of the damaging confusions of the past. However the neatness and power of these metaphorical handles seems so useful. At this stage of the project both traditional and new terminology may be compatible. Experimentation with combined usage will proceed with awareness of possible pitfalls in both the short and the long term, and the potential need for change.

## **SOME ISSUES IN PSYCHOMETRIC DEVELOPMENT**

The attempt to understand people better, to identify individual characteristics and predict possible ways of behaving, underlies the history of psychological assessment. Methods for doing this have evolved over the centuries from ancient arts such as astrology and palmistry, through the behaviour sample approach of Galton in the 19<sup>th</sup> century to Binet's investigation into mental functioning using graded tasks for assessing word knowledge, reasoning and numerical ability at the beginning of the 20th. As well as measuring skills and abilities, scientists were interested in 'character' and 'temperament' and attempted to measure them as real entities in the same way as height and weight. Webb (1915) created his 'biographic method', an analysis of written personal life histories, a precursor of the modern 'biographical data blank' approach.

Parallel with the motivation to measure normal human capacities emerged the interest in formal assessment of abnormal human behaviour. Kraepelin in the 1890s initiated the use of word association techniques, and later, supported by the views of Carl Jung (1910), Kent & Rosanoff (1910) continued the development. These techniques formed the basis both for the development of a variety of further projective tests and for the various types of self-report questionnaire, starting with Woodworth's (1919) for personnel selection in the First World War. Ways to map individual human differences then developed in two distinct strands for two main purposes:

- The diagnosis of pathology, in which there has been an emphasis on psychoanalytically based projective methods.
- Screening and selection procedures, in which the prevailing method has been the self-report questionnaire.

Although these two strands of psychological assessment have been, and largely remain, separate, according to Lanyon & Goodstein (1997), the underlying assumptions and methodologies apply to both aspects of development, even though their respective applications are so different. The TA-based instrument proposed could potentially provide a bridge or link between these two strands in that:

- Its theoretical underpinning of TA addresses both the intrapsychic and the interpersonal, as discussed above.
- Its measurement results will potentially be useful in contexts of personal and professional development, and also those concerning clinical diagnosis.

The link would be through the nature of the test results' behavioural profile analysis, which is appropriate and relevant in both contexts. This analysis could be used as the behavioural component of TA's four types of clinical ego state diagnosis; which would illuminate what Lanyon & Goodstein (1997) call the "*internal, organismic variables*" (page 124) of intrapsychic work. It could also be used to describe and explain the observable variables of human functioning, which are the ingredients of behavioural change at the interpersonal level.

The efficacy and value of psychological measuring devices using self-report techniques such as questionnaires and checklists has been constantly debated. Undoubtedly, large numbers of people can be assessed relatively quickly and easily giving an "*economical determination*" (Lanyon & Goodstein 1997 p 187) of participants' characteristics at a particular time. In situations where it is important for the participants to make positive use of the information in the results, the generation of 'objective' results that are, however, the outcome of participants' own input, may make it more likely that they will accept, and learn from, the information. It is important that the instrument chosen is suitable for the task (Bartrum & Lindley 1994). When evaluating a measure, its susceptibility to response distortion must be taken into account, see Chapter 3. Some instruments incorporate psychometric devices to detect or avoid response sets and/or response styles that would invalidate the usefulness of the test. Lanyon & Goodstein (1997) argue that careful test construction can satisfactorily reduce such effects, with the exception of deliberate deception, and that on the whole the advantages outweigh the disadvantages.

Self-report questionnaires were originally designed to be stable and insensitive to "*transient fluctuation in mood or the vagaries of the test-taking situations*" (McLeod 2001 p 217). McLeod argues that they were not devised as measures of change, and care needs to be taken not to assume that they can be efficacious in this regard. This means that test design and development

of an instrument purporting to promote change must take into account the potential difficulties, for instance the social desirability factor (Paulhus 1986) and the need to provide for conditionality of possible responses to test items. Methodology must also bear in mind the issues involved in the potential lowering of scores as a result of completing the instrument and thus increasing self-awareness and personal insight through the resultant recalibration of concepts of attitudes and/or modes of behaviour. Howard et al (1979) refer to this as the 'response shift phenomenon'.

Another hazard is the 'Barnum Effect' (Meehl 1956) or 'Aunt Fanny Error' (Tallent 1958). These terms refer to the psychological phenomenon whereby people tend to force-fit test result generalisations about their character into the way they view themselves already. They express agreement and pleasure with the results by ignoring any new information. It is likely to happen when test results are expressed in trivial generalisations that would "*fit anyone's Aunt Fanny*" (Lanyon & Goodstein 1997 p 5). Historically popular folk methods such as horoscopes or crystal ball reading have suffered from this characteristic. However, it is still a hazard in any instrument feedback design and can be found to a degree in up-to-date test materials, especially perhaps those using computer-generated feedback scripts, e.g. the Emotional Intelligence Questionnaire (Dulewicz & Higgs 1999). Avoidance of 'Barnum Effect' entails careful attention to item design and refinement through an ongoing process of piloting, data analysis and respondent evaluation in order to make expression of results specific, accurate and suitably detailed.

## **CONTEXTUALISATION OF TEMPLE'S MODEL IN TERMS OF PSYCHOMETRIC DEVELOPMENTS AND TEACHER EDUCATION**

As outlined in the Introduction, the application of the Functional Fluency Index (FFI) will be designed to increase the self awareness and understanding of participants. Self awareness is cited (Goleman 1998) as a key component of emotional literacy, which in turn is claimed to be a key attribute for success in both professional and personal situations. The Functional Fluency Index will not be identifying participants either as belonging to a particular type, as in the Myers Briggs Type Indicator (1943), or as possessing particular traits as in Cattell's (1989) 16PF test. Rather than using the language of 'states' and 'entities', the FFI will be concerned with processes (Totton & Jacobs 2001). It will be offering a profile constructed from the range of test scores. This profile will be akin to a 'snapshot' of the person's behaviour patterns, and skilled feedback will help participants to understand and make sense of their profiles. The design of the instrument, the scoring and the feedback processes will rest on TA principles of respect and openness, using the

visual symbols and vivid language that contributes to TA's accessibility and appeal. Active but non-judgmental co-exploration of results will aim to help participants recognise and own the evidence of their personal habits and patterns by encouraging confidence and optimism, which are important ingredients for such a process. The goal for using the FFI, to promote self-awareness and emotional literacy, echoes the goal of Transactional Analysis from the beginning, namely the attainment of autonomy. Berne himself (1961) referred to the essence of autonomy as lying in a person's freedom to choose how to behave in the present moment, from an increasing variety of options.

This project has a similarity of approach with the Adlerian theory-based instrument, the Life Style Personality Inventory (LSPI) developed in 1982 by Wheeler, Kern and Curlette (1993). Both the FFI and the LSPI combine theoretical and empirical approaches, and aim to involve respondents in active meaning-making of results, with the aim of increasing self-awareness and understanding. As discussed in previous sections, the focus of the FFI is on unique behaviour patterns with ingredients intrinsic to all human beings. This characteristic too is somewhat similar to the LSPI, which has a focus on how a person's belief patterns developed in the past may be continuing to exert a current influence. This means that the insights and self-awareness gained from such instruments are applicable in all aspects of life. The FFI is therefore somewhat different from psychometric tests that are competency-based, such as the Emotional Competency Inventory (Watkin 1999), or those designed for occupational settings and guidance, such as the multi-scale Hogan Personality Inventory (Hogan 1996), the Emotional Intelligence Questionnaire (Dulewicz & Higgs 1999) and the Team Management Profile (Margerison & McCann 1990). This difference, and the fundamental nature for human beings of the characteristics measured by the FFI, may make it suitable as a complementary instrument to some of the occupationally focussed tests. In particular it could be used as an introduction to in-depth personal development work with a skilled counsellor or life coach, if that were part of the contract for use following, for instance, a professional appraisal.

It is the nature of the FFI's focus on growing up, upbringing and survival that makes it particularly appropriate for use with people in the helping professions, as they are in the business of 'parenting' as a crucial aspect of their professional work. The fact that the FFI is designed to promote self-awareness and understanding is intended to assist practitioners in the taking of responsibility for self in relation to others. This makes it particularly relevant to the concerns expressed by McCormick & Solman (1992), referred to in Cohen & Manion (1995). They noted

from their research that, markedly less than other groups, teachers rated themselves as very/extremely responsible for their own stress. This offers evidence of the need for some teachers for help in assessing their roles in professional relationships.

I want to create a tool for the enhancement of effectiveness of teachers and related professionals. I believe in the veracity of the proposition that 'the medium is the message' (McLuhan 1964). I find the coherence of the philosophy, principles and practice of Transactional Analysis a productive medium for personal development. I also find the flexibility and aptness of the theory in this matter conducive to the creative evolution of ideas. I therefore consider that, so long as I avoid the conceptual pitfalls as outlined above, a TA theoretical approach will provide a highly appropriate and practical foundation on which to base my methodology for instrument design, presented in Chapter 3.

# CHAPTER 3

## THE METHODOLOGICAL PROCESS OF THE DEVELOPMENT OF THE FUNCTIONAL FLUENCY INDEX

### INTRODUCTION

The FFI is a measurement based on a rational-theoretical strategy of construction (Lanyon & Goodstein 1997). It is, to use their terminology (page 58), "*congruent with a particular theoretical view*" of human psychological functioning, that of Transactional Analysis, and is designed to assess concepts within that theory. The creation and selection of test stimuli adhered consistently to the demands of the theoretical model, while using a combination of rational and intuitive strategies in their development. This was consistent with what Lanyon and Goodstein (1997) call "*state of the art method*" (page 119), in which a measurement instrument employs a rational and/or theoretical basis for initial item development, and follows up with the use of empirical and factor-analytic methods for the process of item refinement. Lanyon & Goodstein make their claims for this being the process of choice on the basis of their consideration of the extensive research both by Ashton & Goldberg (1973), who compared the effectiveness of rationally composed scales with that of empirically developed scales, and by Burisch (1984), who reviewed sixteen studies that compared scale construction strategies.

The behaviour pattern profiling of the FFI will be achieved by means of a self-report questionnaire. It will measure the usage of the various modes of behaviour featured in Temple's (1999) expanded model of human functioning as described in Chapter 2. This Functional Fluency model will act, according to Nunnally (1978), as "*an internally consistent plan for seeking a good scaling of an attribute*". Nunnally continues, "*Having a plan increases the probability of finding an acceptable measure*" (page 31).

According to Lanyon & Goodstein, there are three issues to be considered in the assessment of whether an instrument can be properly called "*a standardised assessment procedure in a formal sense*" (page 56).

1. Are the stimuli to be used in the assessment process identical for all respondents and always presented in the same fashion?
2. Are there available norms - or frequency distributions of responses, either formal or informal (intuitive) - so that responses from test-takers can be assigned to a specific place within an anticipated range?

3. Are there useful personality and/or behavioural correlates of the test-takers' responses?

Firstly, standardisation of procedure is an important condition for any formal assessment device, so this was built in to the design of the Functional Fluency Index questionnaire.

Secondly, although the Pilot Study results might provide sufficient evidence for suggested provisional norms for a limited population, formal norming procedures would have to be undertaken following the refinements to the instrument arising out of the results of the Pilot Study. The third issue will await evidence from future studies, following the refinement process indicated in the second part of this study.

The project was designed in two parts. The first part concerning the construction of the Functional Fluency Index questionnaire and the first major pilot study is dealt with in this chapter. The second part concerning the data analysis, discussion of results and planning for the further instrument refinement is dealt with in Chapters 4-6.

### **General Design Issues**

The methodological design incorporated attention to issues of reliability and validity. The principles for establishing measurement reliability cited by Neuman (1994 p129) were adopted and followed thus:

1. Clear conceptualisation of constructs.

Construct conceptualisation for this study, a vital foundation, in fact took place over some years prior to the start of the project. This entailed the development and trialling of the Functional Fluency model used as the basis of the study (Temple 1990,1999). Similarly the pool of descriptors used in stage one of the study was generated and developed over a period of years using a wide variety of sources.

2. Use of multiple indicators.

Using information from the initial Descriptor Sort Exercise, it was decided to use twelve indicators to measure each of the nine constructs in the theoretical model. *"Reliability tends to increase as the number of items in a combination increases"* (Nunnally 1978 p 67).

3. Precise levels of measurement.

Indicators were measured at ordinal level, using six categories of refinement.

4. Use of pilot tests.

Major pilot tests were a key aspect of the project design. As well as this, the principle of piloting was put into practice whenever feasible to improve effectiveness of instructions, layout, design of exercises etc.

Nunnally (1978) claims that *"To the extent to which measurement error is slight, a measure is said to be reliable"* (page 191). The efforts cited above were intended to reduce systematic error or bias that would produce skewed results. Attention was therefore paid both to the actual structure and matter of the measure - the content - and to the process of creating the measure stage by stage. Random errors can never be completely eliminated, but the attention paid to consistency of organisation and appropriateness of development processes was intended to increase the stability of the final instrument.

Various devices to establish and demonstrate levels of validity and reliability were used during the study. (The stages referred to are described on the following page.)

- The Descriptor Sort Exercise, in Stage 1, was replicated with twenty German expert judges, using a translation of the materials into German. Consistency of results was demonstrated, confirming construct validity as well as reliability.
- The Pilot Study, in Stage 8, included a split half study by using the two parallel questionnaire forms to test equivalence reliability.
- Also included in the Pilot Study was a plan to execute a battery of test-retest sub-studies designed to evaluate the equivalence of the two questionnaire forms as well as the stability reliability of the instrument. (The issue of reliability across time had to be addressed and tested bearing in mind that it is the purpose of the FFI that it should induce behavioural change in test-takers. This meant that the usual test-retest method of reliability assessment would not be relevant.)

Attention was paid throughout the study to the measurement validity, to make as good a fit as possible between the constructs and the operationalised indicators thereof. As Neuman (1994) writes, *"Measurement validity refers to how well the conceptual and operational definitions mesh with each other"* (page 130) in the cause of the creation of what he calls a *"true measure"*.

Different aspects of measurement validity were given particular attention during different stages of the study:

1. Face validity. The design of the Descriptor Sort Exercise set out to show that the constructs of the model had high face validity, by seeking the rate of consensus amongst a high number and wide range of expert judges as to their description.
2. Content validity. As above, the range of consensus of the judges gave a wide and comprehensive description of each construct.



3. Construct validity. The factor analysis in part two of the study showed how consistent the multiple indicators were for each construct. Convergent and divergent validities were also demonstrated at this stage.

High internal validity was aimed for through thorough validation exercises and careful item development in order to reduce systematic error. The concept of external validity was not relevant to the initial development of the FFI. Plans for the future included relevant correlation studies to test external validity.

### **The Methodological Process**

The methodological process was designed to proceed in a series of separate stages, each one unfolding from the one before. These would include the creation of the Functional Fluency Index instrument, and the first major pilot study. The earlier findings would inform the data collection of subsequent stages in a logical progression of focus. In order to maximise coherence, the rest of this chapter will follow this unfolding pattern, presenting methodology, rationale and discussion of results, stage by stage. It will thus show how each stage evolved according to the findings from each data collection. McGilchrist, Myers and Reed (1997), Kemnis and McTaggart (1982) and Elliott (1981) have proposed similarly reflexive processes. What these processes have in common is a spiralling flow of action that includes having a general plan to embark on, a study of some sort, then monitoring and analytical procedures from which emerge revised ongoing plans for the next stage. Such a pattern is repeated in order to maintain relevant and well-considered decision-making in the cause of the creation of a high quality project (Pollard & Tann 1987). In this way the study is informed by both theory and empirical evidence, rather than only being driven by the theory (Denscombe 1998).

The stages of the methodological process were as follows:

#### **Stage 1 Validation of Constructs May – August 1998**

The theoretical constructs inherent in the nine Modes of the Functional Fluency model (Temple 1999) were validated using 36 expert judges undertaking a Descriptor Sort Exercise.

#### **Stage 2 Analysis of Descriptor Sort Results – September 1998**

The results were analysed and examined in order to produce nine 'word pictures' to encapsulate the nine constructs. Each word picture comprised six descriptors.

The first of these is the fact that the  
 government has a long history of  
 intervention in the economy. This  
 has led to a number of problems,  
 including inflation and unemployment.  
 The second is the fact that the  
 government has a long history of  
 corruption and mismanagement. This  
 has led to a number of problems,  
 including a lack of transparency  
 and accountability.

### The Economic Situation

The economic situation in the country  
 is dire. The government has a long  
 history of intervention in the  
 economy, which has led to a  
 number of problems, including  
 inflation and unemployment. The  
 government has a long history of  
 corruption and mismanagement,  
 which has led to a number of  
 problems, including a lack of  
 transparency and accountability.  
 The government has a long history  
 of intervention in the economy,  
 which has led to a number of  
 problems, including inflation and  
 unemployment. The government has  
 a long history of corruption and  
 mismanagement, which has led to  
 a number of problems, including  
 a lack of transparency and  
 accountability. The government has  
 a long history of intervention in  
 the economy, which has led to a  
 number of problems, including  
 inflation and unemployment. The  
 government has a long history of  
 corruption and mismanagement, which  
 has led to a number of problems,  
 including a lack of transparency  
 and accountability.

Stage 3 Generation of Behavioural Indicators October – December 1998

Using the Delphi method (Dalkey 1972), seven groups of people with a range of TA expertise generated a pair of sentences designed to illustrate behaviourally each of the descriptors in the nine 'word-pictures' (a goal of 108 sentences from each group).

Stage 4 Selection of Appropriate Behavioural Indicators January – February 1999

The complete collection of generated sentences was distributed back to the seven groups, who voted for the two behavioural indicator sentences that they considered best illustrated each of the descriptors.

Stage 5 Design of the FFI Self-report Questionnaire April 1999

Measurement and scoring design decisions were made.

Stage 6 Creation and Validation of Test Items May – June 1999

Four behavioural indicators for each of the fifty-four descriptors were converted into suitable test items. These were then validated as representing the nine constructs, using an ipsative sorting exercise similar to that in Stage 1 above, using twenty expert judges.

Stage 7 Construction of the Functional Fluency Index July – September 1999

The validated test items were further refined, and the FFI questionnaire designed and constructed.

Stage 8 Pilot Study of the Functional Fluency Index October 1999 – May 2000

The Pilot Study, including sub-studies, was conducted with 302 respondents all from the helping and related professions of human service provision.

## **VALIDATION OF CONSTRUCTS: DESCRIPTOR SORT EXERCISE**

The foundation-laying stage of validating the theoretical constructs comprising the nine Modes of the Functional Fluency model was vitally important. Particularly because it was a development from the conventional TA model, see Chapter 2, I judged it essential to involve a wide span of expert judges in an exercise to demonstrate the validity, recognisability and differentiation of the model's constructs. There were finally 36 expert judges. Full details of who they were, and how they were selected are on page 53.

The Descriptor Sort exercise chosen for this task was designed to ensure that the constructs to be used were valid conceptually in terms of the theory, 'content validity', and operationally in terms of practice, 'face validity'. This was shown by the degree of consensus with regards to description of the constructs between a range of expert judges (Neuman 1994) and the

degree of support by the judges of the researcher's proposed model. The exercise had, in fact, two main aims. The first, as outlined above, had three objectives: firstly, to show that each construct was differentiated from all the rest, secondly to show that there was agreement by the experts on the nature of each construct as part of the Functional Fluency model presented, and thirdly to show that this agreement tallied sufficiently with the researcher's proposals. Thus the degree of usefulness of the constructs for the purpose of test construction, 'construct validity', would be demonstrated. Neuman (1994) cited the American Psychological Association in stating that in general the validity of a construct was shown by the degree to which it was capable of achieving its aims. The second aim was to provide the foundation stage for the FF! test construction, see page 74.

The 36 judges worked independently and assigned each of a set of 90 descriptors (single words), to one of the nine constructs, so that, by having many judges, each construct received a variety of descriptors. The meaning of each construct was thus described according to the collective and individual opinions of the set of judges. This exercise, termed a Descriptor Sort, had some of the aspects of Thurstone Scaling (Neuman 1994) in that the degree of agreement between judges was demonstrated and also the most agreed on descriptors for each construct were identified, thus making it possible to choose a range of descriptors to encapsulate the meanings inherent in the constructs.

It was important for the judges to keep in mind that this was a theoretical exercise, not a practical matter of assessment or description of an actual person. As Sarbin (1968) points out, it is easy for our verbal habits and language system to beguile us into reifying constructs so that they tend to be thought of as real entities rather than 'convenient explanatory fictions'. This has often happened with the TA functional model of ego states in the past, see the discussion in Chapter 2, when the behavioural modes have been referred to as ego states, (i.e. real entities) and the possibility of doing a clear behavioural analysis has been compromised.

The words for the Descriptor Sort exercise were chosen from a variety of sources, following discussion with TA colleagues, other educators such as educational psychologists, early years and special needs specialists. Two English language specialists gave input with regard to semantic details. The researcher, therefore, like Neuman (1994), created the Original Adjective Collection by "*reviewing the literature, personal experience, mass media and from asking others*". (page 157). Some specific sources for the words were:

The first part of the report deals with the general situation of the country and the position of the various groups. It is followed by a detailed account of the events of the past few days, and a description of the current state of affairs. The report concludes with some suggestions for the future.

The second part of the report is a detailed account of the events of the past few days. It begins with a description of the situation in the morning, and continues through the day, describing the various incidents and the actions of the different groups. The account is very detailed and includes many names and dates.

The third part of the report is a description of the current state of affairs. It discusses the various groups and their activities, and the current situation in the country. It also includes some suggestions for the future, and a list of names and dates.

The fourth part of the report is a list of names and dates. It includes the names of the various groups and individuals mentioned in the report, and the dates of the events described. This part is very detailed and includes many names and dates.

1. TA literature especially Berne (1961), Dusay (1977), Kahler (1977), Karpman (1971), Illsley Clarke (1978) Erskine & Moursund (1988), Clarkson (1992), Lapworth, Sills & Fish (1993).
2. Experiential exercises devised between 1979 and 1996 for courses and workshops at professional conferences, for example A. Lee, S. Fish, S. Temple and T. Newton.
3. Student and colleague contributions during workshops, experiential sessions and discussions, especially during the trialling of the nine-construct functional model, between 1990 and 1998.
4. The Adjective Checklist (Gough & Heilbrun 1983). This was an important source of inspiration and realisation of the need for an up to date and relevant collection of words.
5. Dictionary and Thesaurus (Chambers 1959, Roget 1987) were consulted frequently.
6. Discussions with non-English speakers and American-English speakers during TA conferences and training courses.

The descriptors to be sorted were adjectives that the researcher had selected as suitable for describing the nine constructs of the model. Words were chosen to describe a range of aspects of the nature of each theoretical construct, i.e. the mode or type of behaviour.

*"The use of multiple indicators that measure several aspects of a construct improves content validity". (Neuman 1994 p 156)*

An 'Original Adjective Collection' was made, consisting of 137 words, grouped under each construct name. The 90 words for the Descriptor Sort Task were the researcher's final choice of the 'ten best bets' for each construct. In order to give as even an emphasis as possible to all the constructs, the same number of adjectives for each one was chosen. This was judged to be very important because of the aim to avoid the historical and cultural biases of previous models. An example of this bias was demonstrated in Kaufman & Kaufman's (1972) TA study that compared Parenting behaviours of mothers with that of their own mothers. The methodology seemed to reinforce the discounting of positive aspects of control by designing the Parent behaviour questionnaire with 22 items for positive care but only 6 for positive control.

A numbered alphabetical list of the 90 words was made. Using alphabetical order helped to avoid confusion or bias over groupings of words. The numbering made manual recording easier as numbers took less space than words and were quicker to sort. They were also ready for later computer coding. The three sheets of words thus created were copied and cut up into separate sets of 90 word cards and two blanks.

### **Descriptor Sort Exercise**

Each of the 36 expert judges, working individually, sorted a pack of the 90 word cards (descriptors) into nine Mode-named envelopes, assigning each word to the Mode it seemed to

describe best. Any words the judge deemed unsuitable into any of the nine envelopes were put into a tenth envelope marked "Uncertain", though the instructions asked that this be considered only as a last resort. Judges were provided with a kit comprising:

1. Instructions, a diagram, and a set of explanatory notes.
2. A set of named envelopes, one for each construct, and one marked 'Uncertain'.
3. A collection of 90 word cards describing the nine constructs, plus two blanks, in case people wished to contribute extra words.

### **Piloting the instruction sheet**

At a meeting of TA colleagues to present the aims of the research project, April 1998, it was decided that the Instructions for this Descriptor Sort Task would be piloted with 10 experienced TA practitioners knowledgeable in TA, the project aims and the purpose of the exercise. This was in order to check and improve the clarity and helpfulness of the Instructions. The group of ten subjects for piloting this material comprised four psychotherapists, three educators, two organisational consultants and a social worker.

The material sent out for comment comprised:

1. Kit list and instructions.
2. Introduction outlining the context of the Task and its purpose.
3. Notes defining the functional Modes, i.e. the 9 constructs to be described in the Exercise.

Suggestions received from this group included making the actual instructions more specific, clarifying further the orientation of the project, its purpose and that of the task in question, and then clarifying and expanding the notes on the Modes, with a reminder that the frame of reference was educational. It was clearly necessary to articulate precisely the parameters of the nine Modes to aid recognition of descriptors as differentiating between them. Two of the volunteers in particular had queries about the theoretical basis of my functional model. Ensuing discussion over the phone resulted in revising the notes in 3 above.

### **The expert judges**

The **first group (A)**, comprised 14 people, 3 men and 11 women, all of them TA trainers. Ten were clinical specialists, two organisational and two educational. Eleven were Provisional Training and Supervising Transactional Analysts, and the other three Training and Supervising Transactional Analysts, i.e. the highest training status in the organisation.

All but one had trained initially with people from a clinical TA frame of reference, and all participants were deeply imbued with the traditional concepts. The organisational and educational

trainers were very experienced at applying these concepts in their respective contexts, however, and two had contributed extensively to the literature of their specialisation. Participants came from a wide UK geographical area, city and rural, and the group included one member from the USA.

The **second group (B)**, comprising 9 people, was initially chosen in three groups of three, especially to add variety of background to the range of expert judges.

- Three Certified Transactional Analysts, clinicians who had passed their Level 1 exam.
- Three Finnish Early Childhood Education Specialists who had studied Educational TA at Masters level in a university degree, part-time, for at least two years.
- Three TA trainees, two clinicians and one educator, who was from Ireland.

As initial analysis of the results from **groups A and B** revealed various interesting balances and biases, before going any further with the analysis, it was decided to run the exercise again with another group of 14 experts, **group C**. This group consisted of educators from a wide span of educational contexts, who had studied Educational TA at Masters level, but who did not have a background of traditional TA training.

It was then possible to divide the second **group B** into clinicians and educators and allocate four of each to **group A** and **group C** respectively. (N.B. This was feasible because one of the clinical trainees in **group B** turned out not to be in official TA training any longer and so was not eligible to do the exercise, thus making the group size eight, not nine).

This distribution achieved in effect two cohorts. One, **COHORT X**, consisting of eighteen official TA trainers and clinicians, trained within the traditional frame of reference, and the other, **COHORT Y**, consisting of eighteen experienced educators who had all studied advanced level Educational TA. Thus the total number of expert judges was thirty-six.

This enlargement of numbers also gave the opportunity to have results from a very wide range of expert judges, which, as already explained, was considered advisable for this study. In addition, the large number of judges involved helped to avoid the usual difficulty of obtaining sufficient evidence of discrimination in a simple endorsement exercise such as a Descriptor Sort (Lanyon & Goodstein 1997).

### **Results from the two cohorts of judges**

My interest in finally organising two groups in this way for a construct validation exercise was fuelled by the patterns and biases evident in group **A**'s results. I was curious to find out whether these would be replicated in the results from the TA educators who did not have the traditional TA training background. If both groups' results turned out to be similar, there would be



an implication that such patterns were common in a wide-ranging population. If the patterns only showed up in the traditionally TA trained cohort, it would indicate that they might be to do with TA's particular cultural frame of reference.

There was some evidence that the word 'egocentric' was unfamiliar to seven of the judges, who placed it in negative Parent Modes, SPONTANEOUS Mode or 'Uncertain'. One or two of the words were misread by a few judges, e.g. 'authoritative' was read as 'authoritarian', and 'inspiring' was read as 'inspired'. Some of the words, it turned out, could mean more than one thing, thus confusing the allocation for some people. 'Appreciative', for instance, if taken to mean 'affirming' would fit for NURTURING Mode. If taken to mean 'grateful', it was considered to fit for COOPERATIVE Mode. Some words were too general to be of much use in differentiating between constructs, as they could fit in several places appropriately, for instance 'emotional', 'vulnerable', 'careful' and 'responsive'. Several judges put one or more of these in their 'Uncertain' envelopes. Several words seemed to epitomise a Mode and all, or nearly all, judges chose the same Mode for them, e.g. 'zestful' for SPONTANEOUS, 'fault-finding' for CRITICISING and 'over-indulgent' for MARSHMALLOWING.

As requested, judges mostly refrained from allocating words to the 'Uncertain' envelope. Twenty-four out of the thirty-six put in none. Eight judges put in one or two words and only four judges put in a large quantity, - 10, 11, 19 and 25 respectively, either in disregard of the instructions or, in one case, because of giving up on the exercise. As well as those words mentioned above, one or two were put in 'Uncertain' probably because judges weren't sure what they meant, e.g. 'grounded' and 'egocentric', or they couldn't relate it to the model at all, e.g. 'disorganised', which, at 7 times, was by far the most rejected word.

Although in this exercise there was little danger of the usual rater errors such as "*generosity*" or the "*halo effect*" (Lanyon & Goodstein 1997 p 169), there was a version of the "*constant error*" phenomenon. This was due to the common confusion in traditional TA practice between the concepts of functional modes and structural ego states. This applies most particularly to the term 'Adult' which is used to refer to an actual ego state, and also to refer to the manifestation of an ego state that I term ACCOUNTING Mode, see discussion in Chapter 2. This meant that some judges, when they forgot the definitions of my updated model in their instruction notes, and reverted to working from previous assumptions, occasionally assigned most of the positive-sounding descriptors to ACCOUNTING Mode, thinking of it as Adult ego state. They put

Faint, illegible text at the top of the page, possibly a header or introductory paragraph.

Section header or title, possibly "CONCLUSION" or similar, written in all caps.

Main body of faint, illegible text, appearing to be several paragraphs of a document.

in a range of descriptors that didn't relate specifically to the data processing function of Reality Assessment that is ACCOUNTING Mode, and this prevented them from considering more precisely how these descriptors might have fitted for the other four positive constructs in the model.

This phenomenon was very striking in the first cohort of TA Trained judges, see further discussion on page 61. Other evidence of the effects in practice of the traditional TA model was:

- Indication of a lack of differentiation between spontaneity and immaturity. Evidence of this, for example, was that ten judges put 'impulsive' into SPONTANEOUS, and seven put it into IMMATURE.
- Sense of COOPERATIVE Mode as being passive and agreeable and lacking potency and initiative. The most chosen words were 'polite', 'helpful' and 'considerate'.
- Indication of lack of differentiation between compliance and cooperation. This links with the two previous points to emphasise the traditional lack of a fully differentiated positive construct for the Socialised element of the Child category of functioning. It shows not only the need for a Positive Socialised Child Mode but also a Negative Natural Child Mode in the functional model, in order to balance and sort the four constructs in the Child category.
- Lack of a sense of STRUCTURING as an essential and positively beneficial component of Positive Parenting, i.e. its desirableness was missing. The most chosen words were 'directive', 'authoritative', 'consistent' and 'tough', worthy, but not very appealing.
- Lack of differentiation between the Control and Care elements of Positive Parenting. A choice of descriptors more appropriate for STRUCTURING was put into NURTURING, e.g. fair, flexible and helpful. This links with the previous point, and emphasises the lack of a fully differentiated positive construct for the Control element of the Social Responsibility category of functioning.

On the whole, the results from the second cohort of judges turned out to be broadly similar to the first, with minor interesting variations. They seemed to show that the evident patterns and biases indeed existed in a wider population than the TA community. One phenomenon showed up across both cohorts. Practitioners whose professional work involved them particularly with parents of young children chose the word 'inconsistent' for MARSHMALLOWING Mode (12 out of 36 judges). These judges had specialist knowledge to underpin their judgement on this choice. Other judges put it in CRITICISING (N=3), COOPERATIVE (N=1), COMPLIANT/RESISTANT (N=4), IMMATURE (N=6) and 'Uncertain' (N=3) as well as MARSHMALLOWING (N=7). Details

such as this lent validity to the final Word Pictures created for each Mode. Full details of the results are illustrated and discussed in the next sections.

Results from the thirty-six judges were plotted on two charts so that profiles of each construct could be made for both cohorts of eighteen. This revealed patterns of choices, both within each subject's set of choices, and within the range of choices for each particular construct. Tendencies, biases and possible errors were easy to identify and check out. This process gave empirical evidence for some of my theoretical assumptions and hypotheses. In particular this supported my proposition that the traditional TA functional model needs to be expanded and conceptually re-balanced, for the purposes explained in Chapter 2. Further such evidence was noted and analysed at subsequent stages.

## **ANALYSIS OF DESCRIPTOR SORT RESULTS**

The three objectives of the analysis were:

1. To ascertain whether each construct had been differentiated from all the rest.
2. To find out the degree of consensus by the judges on the nature of the constructs in terms of the descriptors.
3. To discover how the overall judges' choices of descriptors for each Mode compared with the researcher's original proposed choices.

### **Recording of Word Choices**

Initial recording was onto two large data charts in the form of matrices, one for each cohort. Each word card had a number on it between 1 and 90. On each matrix, all the judges' choices were recorded by the number of the word in the appropriate box, so that it could be seen at a glance what each judge had chosen for each Mode. (On all recording sheets, the identity of the judges was indicated by code in order to preserve confidentiality). Summaries of the data are presented on pages 72 and 73.

**Table 3.1. Descriptor Sort Data Chart**

	Criticizing	Marsh-mallowing	Structuring	Nurturing	Accounting	Cooperative	Spontaneous	Compliant/Resistant	Immature	'Uncertain'
A										
B										
C										
D										
E										
F										
G										
H										
J										
K										
L										
M										
N										
P										
Q										
R										
S										
T										

From these data thus displayed, a Mode Data Sheet was prepared for each Mode. This was done for both cohorts. The following were recorded:

- a) The number of words chosen.
- b) The number chosen only once.
- c) A total list of the words chosen by all 18 judges for the Mode, including the number of times each word was picked.

Thus there were in all 20 Mode Data Sheets, 10 for each cohort, including a sheet to show the data from each cohort's "Uncertain" envelopes. An example of these sheets follows, NURTURING Mode Sheet from the Educator Cohort. The words with the 5 highest voting scores are emboldened. (On this example, this means 6 words, because several scored 14).

Figure 3.1. Example of the Mode Data Sheets

<b>Mode Data Sheet</b>		
<b>COHORT Educators</b>	<b>N = 18</b>	<b>MODE NURTURING</b>
NUMBER OF WORDS CHOSEN	32	CHOSEN ONLY ONCE
WORD NUMBER	WORD	TIMES CHOSEN
1	accepting	8
2	adaptable	1
3	affectionate	8
7	appreciative	2
13	careful	3
14	<b>cherishing</b>	<b>16</b>
16	<b>comforting</b>	<b>17</b>
17	<b>compassionate</b>	<b>14</b>
19	considerate	4
20	consistent	3
21	contactful	5
26	dependable	2
31	emotional	1
32	<b>empathic</b>	<b>14</b>
33	encouraging	8
37	fair	2
39	flexible	2
40	friendly	4
42	helpful	5
50	inspiring	3
52	<b>kind</b>	<b>14</b>
60	<b>patient</b>	<b>14</b>
61	placating	2
64	protective	10
67	reasonable	2
69	receptive	2
72	respectful	3
73	responsive	4
75	self-denying	1
79	soft-hearted	5
85	understanding	10
88	vulnerable	1

The Mode Data Sheets provided the basic data for analysis. The next step was to examine and compare the most popular words chosen by the judges to describe each Mode. Nine Word Selection Sheets were prepared from the Mode Data Sheets to show which words had been chosen most, from the unanimous eighteen vote choices, downwards in order of preference showing the ten most popular words. These sheets showed results from both cohorts and the totals. For each Mode, it could be seen at a glance:

- a) Which words had which scores from each cohort of judges, and what order they came in.
- b) Which were the most chosen first five and first ten words for each cohort.
- c) Which words scored more highly when both cohorts' scores were totalled.

N.B. the significance of b) and c) is featured in the discussion about the criteria for choices for the final Word Pictures on page 78. The set of Word Selection sheets for all the Modes follows:

Figure 3.2. Word Selection Sheets for All Modes

Word Selection Sheet CRITICISING			
Educators & TA Trained—N =18 Total N = 36			
Descriptor	Ed.	TA Tr.	Total
dominating	18	18	36
fault-finding	18	18	36
punitive	17	18	35
judgmental	17	17	34
knows better	16	16	32
threatening	15	16	31
blaming	16	15	31
nagging	13	17	30
bossy	16	12	28
coercing	13	13	26

Word Selection Sheet MARSHMALLOWING			
Educators & TA Trained—N =18 Total N = 36			
Descriptor	Ed.	TA Tr.	Total
over-indulgent	18	18	36
over-protective	18	18	36
over-tolerant	17	18	35
smothering	17	18	35
spoiling	17	18	35
soft-hearted	11	12	23
inconsistent	10	9	19
placating	7	9	16
self-denying	3	7	10
protective	6		

Word Selection Sheet STRUCTURING			
Educators & TA Trained—N =18 Total N = 36			
Descriptor	Ed.	TA Tr.	Total
directive	13	15	28
authoritative	9	15	24
consistent	11	7	18
assertive	8	7	16
tough	6	9	15
precise	9	4	13
inspiring	7	5	12
dependable	4	8	12
fair	8	3	11
encouraging	8	1	9

Word Selection Sheet NURTURING			
Educators & TA Trained—N =18 Total N = 36			
Descriptor	Ed.	TA Tr.	Total
comforting	17	18	35
cherishing	16	17	33
compassionate	14	18	32
kind	14	15	29
empathic	14	14	28
encouraging	8	17	25
protective	10	12	22
understanding	10	10	20
accepting	8	8	16
affectionate	8	5	13

Word Selection Sheet ACCOUNTING			
Educators & TA Trained—N =18 Total N = 36			
Descriptor	Ed.	TA Tr.	Total
deductive	17	17	34
rational	15	18	33
aware	15	16	31
evaluative	14	16	30
grounded	13	16	29
alert	12	13	25
reasonable	11	10	21
enquiring	6	11	17
flexible	8	8	16
precise	6	10	16

Word Selection Sheet COOPERATIVE			
Educators & TA Trained—N =18 Total N = 36			
Descriptor	Ed.	TA Tr.	Total
polite	12	16	28
sociable	13	13	26
adaptable	11	12	23
helpful	11	11	22
friendly	6	11	17
considerate	6	10	16
appreciative	8	4	12
flexible	6	3	9
confident	3	2	5
patient	2	3	5

Word Selection Sheet SPONTANEOUS			
Educators & TA Trained—N =18 Total N = 36			
Descriptor	Ed.	TA Tr.	Total
creative	17	18	35
imaginative	18	17	35
zestful	17	18	35
expressive	16	18	34
curious	16	15	31
ingenious	16	15	31
emotional	7	11	18
affectionate	8	8	16
enquiring	10	4	14
inspiring	6	8	14

Word Selection Sheet COMPLIANT/RESISTANT			
Educators & TA Trained—N =18 Total N = 36			
Descriptor	Ed.	TA Tr.	Total
defiant	14	18	32
rebellious	12	18	30
submissive	13	17	30
withdrawn	16	12	28
inhibited	14	14	28
stubborn	11	13	24
resentful	10	13	23
anxious	7	13	20
self-denying	8	9	17
vengeful	7	9	16

Word Selection Sheet IMMATURE			
Educators & TA Trained—N =18 Total N = 36			
Descriptor	Ed.	TA Tr.	Total
infantile	16	16	32
selfish	16	14	30
self-centred	12	15	27
ego-centric	15	12	27
reckless	15	10	25
inconsiderate	14	9	23
impulsive	10	7	17
disorganised	9	8	17
unreasonable	7	5	12
vulnerable	8	3	11

## Comparison of Judges' Word Choices

More detailed analysis demonstrated the nature as well as the extent of the inter-rater agreement on choices of words. There were several areas of interest and significance. There was clear evidence of a very high level of agreement between the two cohorts, (see the Overview on page 64). The identical five top words were chosen for MARSHMALLOWING and ACCOUNTING. For CRITICISING, NURTURING, COOPERATIVE, SPONTANEOUS, COMPLIANT/RESISTANT and IMMATURE Modes there was only one word different, and the two words involved were usually similar. Examples were: 'blaming' v 'nagging', 'appreciative' v 'considerate' and 'anxious' v 'withdrawn'. Only STRUCTURING had more variance. After agreement on 'directive', 'authoritative' and 'consistent', the Educators' cohort chose 'assertive' and 'fair', while the TA Trained cohort chose 'dependable' and 'tough'. This was more evidence that there was relatively less differentiation of this construct.

The elevated TA Trained cohort's consensus on ACCOUNTING Mode was partly contributed to by the greater number of word choices made for ACCOUNTING, together with the wider range of words chosen. This had the effect of depriving the other positive constructs of possible choices, thus lowering their scores by comparison. In particular, it contributed to the significantly lower differentiations for STRUCTURING and COOPERATIVE Modes. As outlined already on page 55, this was probably because of the conceptual confusion between the structural concept of an Adult ego state and the functional concept of ACCOUNTING Mode. The Educators used an even greater range of words for ACCOUNTING than the TA Trained judges, but voted for them fewer times and produced less consensus. This may indicate a similar conceptual confusion.

MARSHMALLOWING Mode had the highest consensus for both cohorts, mostly contributed to by the nature of the words on offer. 'Over-indulgent', 'over-protective' and 'over-tolerant' were obvious descriptors for this Mode, and nearly all judges chose them, along with 'smothering' and 'spoiling'. The TA Trained judges showed a pattern of higher recognition and affirmation of the most familiar TA functional model concepts, namely: CRITICISING, NURTURING, ACCOUNTING (confused with Adult ego state), SPONTANEOUS and COMPLIANT/RESISTANT. Because STRUCTURING, MARSHMALLOWING, COOPERATIVE and IMMATURE Modes have not traditionally been differentiated and named, they were probably less clearly construed by judges. Apart from the MARSHMALLOWING phenomenon outlined above, this pattern demonstrated the conceptual biases in the traditional model that I have referred to in Chapter 2, with the implication



that Control is basically conceptualised as negative, Care as positive, Socialised (Adapted) Child as negative and Natural Child as positive. This pattern was what I had wanted to check out by replicating the exercise with non-traditionally trained judges, i.e. the TA Educator cohort.

The TA Educators' pattern turned out to be broadly similar, though less accentuated. Disregarding the MARSHALLOWING phenomenon (as above) the Parent Modes' bias was demonstrated, ACCOUNTING was broadly delineated, but not exaggeratedly so, (less conceptual confusion was demonstrated) and the Child Modes showed a different balance in that the levels of the two negative Child consensus scores were reversed. This could be explained by saying that the TA Trained cohort were more used to using COMPLIANT/RESISTANT Mode in matters of pathology diagnosis, and therefore recognised this Mode more acutely. Conversely, the Educators were more used to focusing on developmental matters in ordinary processes of growing up, and therefore showed more familiarity with the concept of immaturity, thus creating a higher focus on IMMATURE Mode.

The crucial similarity between the cohorts was that both demonstrated a markedly lower differentiation for STRUCTURING and COOPERATIVE than for the other Modes, thus giving evidence that there is a wider cultural bias here than just within the TA community. Indeed, as can be seen from the Inter Rater Agreement Diagrams on pages 65 & 66, the Educators showed a stronger bias than the TA Trained cohort did. This evidence supported my claim of a need for a conceptually balanced model for educational purposes as discussed in Chapter 2.

Apart from these issues of patterns and biases in the overall model, there was some evidence of simple error or misunderstanding on behalf of judges, e.g. one judge put both 'respectful' and 'coercing' to describe the Mode STRUCTURING, and another put 'patient' into CRITICISING Mode.

The Educators cohort assigned 'emotional' as often to IMMATURE Mode as to SPONTANEOUS, maybe indicating a cultural sense that emotionality is something people should grow out of. This was not true of the TA Trained cohort, most of whom had a psychotherapeutic training background that would affirm the acceptability of emotionality at any age.

There was some confusion shown by judges over where to assign the word 'manipulative'. Was this to do with 'social responsibility' or 'self actualisation'? This in itself indicated that, as a descriptor, 'manipulative' would not work well. What was interesting was that, of the judges who put it into a Child Mode (25 out of 36 judges), nine put it in IMMATURE. This may have indicated a cultural belief that children are naturally manipulative, rather than that children may learn to

manipulate. This fact, along with choices for IMMATURE of 'aggressive' (10), 'anxious' (11), 'bossy' (4), 'defiant' (3), 'inhibited' (5), 'over-demanding' (6), 'rebellious' (6), 'stubborn' (11), 'vengeful' (12) and 'withdrawn' (6) may give evidence of culturally negative attitudes to very young children. A contribution to this evidence may have been a lack of knowledge or awareness of the necessary differentiation for the use of the model between natural and learned characteristics in children, taking temperament into account. Were this so, then it is further support for my proposal for the need of the model, as it will promote such understandings which would seem to be important for professionals involved in healing and education.

### **Summary of Inter Rater Agreement**

In summary, the examination of the Descriptor Sort Exercise data took into account the following aspects:

- a) The comparison between cohorts (later including the additional German cohort).
- b) The percentage levels of agreement Mode by Mode, similarities and differences.
- c) Evidence of which words were useful and which were not.
- d) Evidence of rater errors, misunderstandings and differences of understanding.
- e) Evidence of cultural biases in conceptualisation of constructs.
- f) Evidence of misunderstanding of an aspect of the nine-construct model.
- g) Evidence of conceptual links between certain Modes, reinforcing the theory underpinning the nine-construct model.

Some of the points were of more peripheral interest, being of a linguistic nature or a matter of semantics. Other points were crucially important in terms of the support they gave to the rationale for the development of the Functional Fluency model. They helped to clarify the purpose of the project to create the Functional Fluency Index, as well as providing the information needed for the development of Word Pictures to delineate the nine Modes in preparation for the following stage of operationalisation.

Collation of the data from the Word Selection Sheets enabled an Overview of the Mode Descriptors to be drawn up. This showed the most chosen five words by both cohorts for each Mode, laid out in the pattern of the Functional Fluency diagram, with the percentages of inter rater agreement alongside for easy reference. Detailed tables on Inter Rater Agreement then showed the make up of the average percentage agreements Mode by Mode for both cohorts.

Summary data follow, firstly the Overview of Mode Descriptors, then the Inter Rater Agreement Tables with diagrammatic illustration in addition.

Figure 3.3. Overview of Mode Descriptors

Most popular 5 words chosen by the two cohorts of judges  
 (Educators with Educational TA Study N=18) (TA Trainers and Trained N=18)

**CRITICISING**

<u>EDUCATORS</u>		<u>TA TRAINED</u>	
dominating	100%	dominating	100%
fault-finding	100%	fault-finding	100%
punitive	95%	punitive	100%
judgmental	95%	judgmental	95%
blaming	89%	nagging	95%

**MARSHMALLOWING**

<u>EDUCATORS</u>		<u>TA TRAINED</u>	
overindulgent	100%	overindulgent	100%
overprotective	100%	overprotective	100%
overtoierant	95%	overtolerant	100%
smothering	95%	smothering	100%
spoiling	95%	spoiling	100%

**STRUCTURING**

<u>EDUCATORS</u>		<u>TA TRAINED</u>	
directive	73%	authoritative	84%
consistent	62%	directive	84%
authoritative	50%	tough	50%
assertive	45%	dependable	45%
fair	45%	consistent	39%

**NURTURING**

<u>EDUCATORS</u>		<u>TA TRAINED</u>	
comforting	95%	comforting	100%
cherishing	89%	compassionate	100%
compassionate	78%	cherishing	95%
empathic	78%	encouraging	95%
kind	78%	kind	84%

**ACCOUNTING**

<u>EDUCATORS</u>	<u>TA TRAINED</u>
deductive	rational
95%	100%
aware	deductive
84%	95%
rational	aware
84%	89%
evaluative	evaluative
78%	89%
grounded	grounded
73%	89%

**COOPERATIVE**

<u>EDUCATORS</u>		<u>TA TRAINED</u>	
sociable	73%	polite	89%
polite	67%	sociable	73%
adaptable	62%	adaptable	67%
helpful	62%	helpful	62%
appreciative	45%	considerate	56%

**SPONTANEOUS**

<u>EDUCATORS</u>		<u>TA TRAINED</u>	
imaginative	100%	creative	100%
creative	95%	expressive	100%
zestful	95%	zestful	100%
expressive	89%	imaginative	95%
ingenious	89%	curious	84%

**COMPLIANT/RESISTANT**

<u>EDUCATORS</u>		<u>TA TRAINED</u>	
withdrawn	89%	defiant	100%
defiant	78%	rebellious	100%
inhibited	78%	submissive	95%
submissive	73%	inhibited	78%
rebellious	67%	anxious	73%

**IMMATURE**

<u>EDUCATORS</u>		<u>TA TRAINED</u>	
infantile	89%	infantile	89%
selfish	89%	self-centred	84%
egocentric	84%	selfish	78%
reckless	84%	egocentric	67%
inconsiderate	78%	reckless	56%

**Table 3.2. Inter Rater Agreement on the 5 Most Chosen Words for Each Mode**

**EDUCATORS N=18**

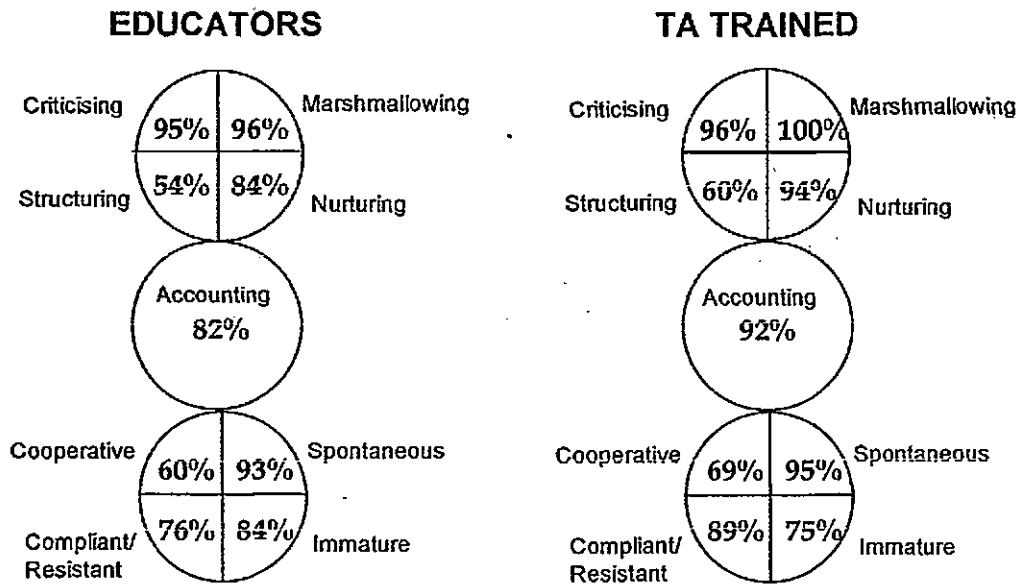
MODES	Number of Judges choosing the 5 Most Chosen Words With percentage agreements					Average no. of judges choosing the set of 5 words	Average Percentage Agreement
	Word 1	Word 2	Word 3	Word 4	Word 5		
<b>CRITICISING</b>	18 100%	18 100%	17 95%	17 95%	16 89%	17.2	95%
<b>MARSHMALLOWING</b>	18 100%	18 100%	17 95%	17 95%	17 95%	17.4	96%
<b>STRUCTURING</b>	13 73%	11 62%	9 50%	8 45%	8 45%	9.8	54%
<b>NURTURING</b>	17 95%	16 89%	14 78%	14 78%	14 78%	15.0	84%
<b>ACCOUNTING</b>	17 95%	15 84%	15 84%	14 78%	13 73%	14.8	82%
<b>COOPERATIVE</b>	13 73%	12 67%	11 62%	11 62%	8 45%	11.0	60%
<b>SPONTANEOUS</b>	18 100%	17 95%	17 95%	16 89%	16 89%	16.8	93%
<b>COMPLIANT/RESISTANT</b>	16 89%	14 78%	14 78%	13 73%	12 67%	13.8	76%
<b>IMMATURE</b>	16 89%	16 89%	15 84%	15 84%	14 78%	15.2	84%

**TA TRAINED N=18**

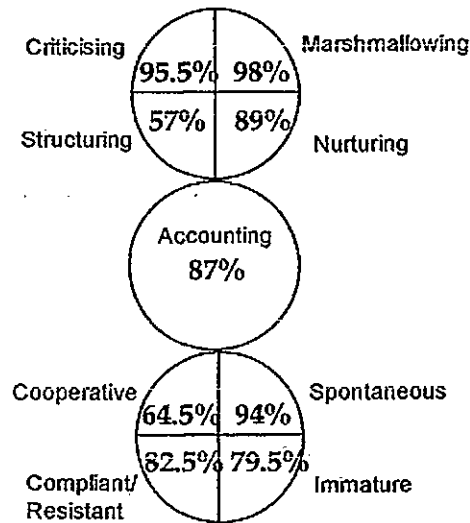
MODES	Number of Judges choosing the 5 Most Chosen Words With percentage agreements					Average no. of judges choosing the set of 5 words	Average Percentage Agreement
	Word 1	Word 2	Word 3	Word 4	Word 5		
<b>CRITICISING</b>	18 100%	18 100%	18 100%	17 95%	16 89%	17.4	96%
<b>MARSHMALLOWING</b>	18 100%	18 100%	18 100%	18 100%	18 100%	18.0	100%
<b>STRUCTURING</b>	15 84%	15 84%	9 50%	8 45%	7 39%	10.8	60%
<b>NURTURING</b>	18 100%	18 100%	17 95%	17 95%	15 84%	17.0	94%
<b>ACCOUNTING</b>	18 100%	17 95%	16 89%	16 89%	16 89%	16.6	92%
<b>COOPERATIVE</b>	16 89%	13 73%	12 67%	11 62%	10 56%	12.4	69%
<b>SPONTANEOUS</b>	18 100%	18 100%	18 100%	17 95%	15 84%	17.2	95%
<b>COMPLIANT/RESISTANT</b>	18 100%	18 100%	17 95%	14 78%	13 73%	16.0	89%
<b>IMMATURE</b>	16 89%	15 84%	14 78%	12 67%	10 56%	13.4	75%

The average percentage agreements in the last column are presented on Functional Fluency model diagrams below, including one for the combined scores of the two cohorts.

**Figure 3.4. Inter Rater Agreement on the 5 Most Chosen Words for Each Mode, Shown on Functional Fluency Model Diagrams**



**COHORTS COMBINED**



## Outcomes From the Descriptor Sort Exercise

It was very clear from the analysis so far that there was high differentiation between the constructs. There was no overlap of choice of descriptor within the first five choices. The only words to appear twice within the first ten choices for combined cohorts for all the Modes were 'encouraging' (STRUCTURING & NURTURING), 'enquiring' (ACCOUNTING & SPONTANEOUS), 'inspiring' (STRUCTURING & SPONTANEOUS) & 'precise' (STRUCTURING & ACCOUNTING ).

The Overview and the Inter Rater Agreement Diagram show that there was a very high consensus on all but two of the Modes. An acceptable degree of agreement (Cohen 1960) using expert judges in this sort of exercise is 0.7 or above. In this exercise, consensus on three of the Modes was well over 0.9, on three more was well over 0.8, on one more was nearly 0.8, leaving STRUCTURING and COOPERATIVE Modes with consensus of agreement of only 0.57 and 0.65 respectively. This result illustrated the lack of differentiation of these two positive concepts and pointed up a major concern of the researcher (see below, and Chapter 2).

The first two objectives of the Descriptor Sort Exercise, therefore, to show that the nine constructs were recognisable and differentiated, and that there was expert agreement on their respective meanings, were fully achieved. The high levels of agreement between the 36 judges' choices indicated that the 5 most popular words for each construct were valid for the purpose for which they were intended, i.e. describing, or indicating, the nature of the construct, and differentiating between them (Neuman 1994).

Results from the repeated Descriptor Sort exercise provided evidence of reliability as claimed. As mentioned above, the exercise also served to show that certain biases, in particular those to do with STRUCTURING and COOPERATIVE Modes, evident from the first cohort of traditionally trained TA experts, were also evident from the second cohort of Educators with some advanced TA study. This demonstrated that the biases are likely to belong within a wider cultural framework than the TA community and served to provide empirical evidence for the researcher's concern that certain positive concepts in education and child-rearing, namely 'authoritativeness' (sic) and assertiveness, are poorly formulated. This makes it more likely that much more recognition and emphasis is given to negative concepts, thus perpetuating negative and less effective attitudes and strategies which hinder healthy child rearing, and fail to promote the development of emotionally literate young people (Goleman 1995). One of the aims of the FFI project is to clarify and emphasise the value of STRUCTURING and COOPERATIVE Modes.

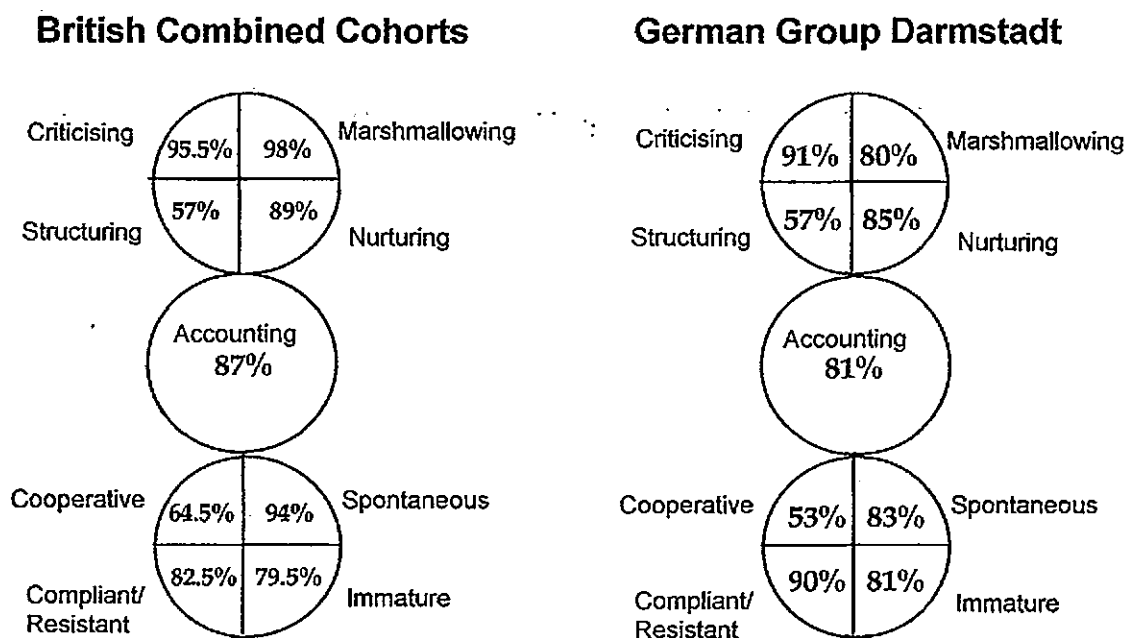
## Replication of Exercise with a Cohort of German Expert Judges

The Descriptor Sort Exercise was replicated using 20 similarly expert judges in Darmstadt, Germany. The materials were translated by the researcher with a German TA colleague, who conducted the exercise with 20 of her educational TA trainees. Care was taken to adhere to the same conditions as the UK groups. All the subjects were experienced educators who had completed at least one year of part-time advanced TA study in Germany. The findings were remarkably consistent with those of the 36 previous judges, see the diagrams which follow, and this replication served to provide further evidence of the reliability of the exercise and the construct conceptualisations. It also provided evidence of the same biases as outlined above in a different population.

**Figure 3.5. Comparison of Inter Rater Agreement on the 5 Most Chosen Words for each Mode Between the Combined British Cohorts and the German Group**

The British combined cohorts included one person from the USA, one from Eire and three from Finland. N=36

Two educational TA trainee groups comprised the German cohort in Darmstadt. N=20



There are some interesting similarities and differences in the two sets of results. Both show lower agreement for STRUCTURING and COOPERATIVE Modes, and higher agreement for what are more familiar constructs, from a traditional TA training point of view. SPONTANEOUS Mode has more agreement than COMPLIANT/RESISTANT in the British results, whereas this is reversed in the German results.

N.B. because the word 'authoritative' was translated into the equivalent of authoritarian by mistake for the German study, its scoring has not been counted. This has meant that the scores for CRITICISING and STRUCTURING in the German study are affected:

- 'Authoritarian' scored 18 for CRITICISING, which would have increased the inter rater agreement, already high.
- STRUCTURING was then left without a key descriptor, and might have had higher agreement if the word 'authoritative' had been available.
- In the British studies, 'authoritative' scored 24 out of a possible 36 for STRUCTURING Mode. It was the second most popular word for that Mode.

Study of the Word Selection Sheets (see page 60), showed that the first five most popular words stood out as encapsulating the meaning of the constructs reasonably accurately. This was true even when the actual scores were lower, as can be seen from the STRUCTURING and COOPERATIVE Sheets.

### **Comparison of Judges' and Researcher's Word choices**

The third objective of the Descriptor Sort exercise analysis was to find out how the judges' choices compared with the researcher's original selection of descriptors. For each cohort, the most chosen ten words for each Mode were plotted on a sheet beside the researcher's Original Adjective Collection selections for each Mode, to show the percentage of agreement. Percentage agreements were noted for each Mode so that they could be compared. Differences and discrepancies were also marked and noted as part of the more detailed analysis needed in order to create the final collections of words to describe or delineate each Mode. These were termed the Mode Word Pictures. They were the basis for the creation of the nine scales of the Functional Fluency instrument.

What emerged from comparing the judges' choices with the researcher's selection from the Original Adjective Collection for the respective Modes, was that, for each cohort, out of the forty-five most chosen five words, construct by construct, forty one agreed with words originally chosen



by the researcher. It was important to note which words did not agree, and to consider where they had been put:

- 'Encouraging' was put in both NURTURING as well as STRUCTURING by the Educator cohort only, so there was half a match there.
- 'Appreciative' was taken to mean grateful and put into COOPERATIVE instead of NURTURING by the Educator cohort.
- 'Helpful' was put into COOPERATIVE instead of STRUCTURING by both cohorts.
- 'Assertive' was put into STRUCTURING instead of COOPERATIVE by both cohorts.

This gave yet more evidence of the patterns and biases discussed above. On the next pages are the relevant data Mode by Mode, and a table showing the percentage agreement between the choices of the two cohorts of expert judges and the researcher's original selection.

**Table 3.3. Percentage Agreement Between the Choices of the Two Cohorts of Expert Judges and the Researcher's Original Selection**

EDUCATORS n=18		MODES	TA TRAINED n=18	
First 10 Choices	First 5 Choices		First 5 Choices	First 10 Choice
90%	100%	CRITICISING	100%	100%
80%	100%	MARSHMALLOWING	100%	90%
70%	60%	STRUCTURING	100%	80%
80%	100%	NURTURING	100%	90%
70%	100%	ACCOUNTING	100%	80%
60%	60%	COOPERATIVE	80%	70%
70%	100%	SPONTANEOUS	100%	90%
80%	100%	COMPLIANT/RESISTANT	100%	80%
70%	100%	IMMATURE	100%	70%

**Table 3.4. Judges' Choices Compared with the Researcher's Original Selection**

N.B. the researcher's selections are in alphabetical order. The Educators' and TA Trained judges' lists are in order of most to least chosen words. Non-matching words are in bold smaller type.

<b>CRITICISING</b>		
RESEARCHER	Educators	TA Trained
blaming	dominating	dominating
bossy	fault-finding	fault-finding
coercing	judgmental	punitive
dominating	punitive	judgmental
fault-finding	blaming	nagging
judgmental	bossy	knows better
knows better	knows better	threatening
nagging	threatening	blaming
punitive	over-demanding	coercing
threatening	coercing	bossy

<b>MARSHMALLOWING</b>		
RESEARCHER	Educators	TA Trained
disorganised	over-indulgent	over-indulgent
inconsistent	over-protective	over-protective
manipulative	over-tolerant	over-tolerant
over-indulgent	smothering	smothering
over-protective	spoiling	spoiling
over-tolerant	soft-hearted	soft-hearted
self-denying	inconsistent	inconsistent
smothering	protective	placating
soft-hearted	manipulative	self-denying
spoiling	nagging	none

<b>STRUCTURING</b>		
RESEARCHER	Educators	TA Trained
authoritative	directive	directive
consistent	consistent	authoritative
dependable	authoritative	tough
directive	precise	assertive
fair	assertive	dependable
helpful	encouraging	consistent
inspiring	fair	protective
protective	inspiring	inspiring
respectful	tough	fair
tough	dependable	reasonable

<b>NURTURING</b>		
RESEARCHER	Educators	TA Trained
accepting	comforting	comforting
appreciative	cherishing	compassionate
cherishing	compassionate	cherishing
comforting	empathic	encouraging
compassionate	kind	kind
empathic	patient	empathic
encouraging	protective	protective
kind	understanding	patient
patient	accepting	understanding
understanding	affectionate	accepting

<b>ACCOUNTING</b>		
RESEARCHER	Educators	TA Trained
alert	deductive	rational
aware	aware	deductive
deductive	rational	aware
enquiring	evaluative	evaluative
evaluative	grounded	grounded
grounded	alert	alert
precise	reasonable	enquiring
rational	assertive	precise
receptive	flexible	reasonable
responsive	receptive	assertive

<b>COOPERATIVE</b>		
RESEARCHER	Educators	TA Trained
adaptable	sociable	polite
assertive	polite	sociable
careful	adaptable	adaptable
confident	helpful	friendly
considerate	appreciative	helpful
flexible	respectful	considerate
friendly	considerate	respectful
polite	contactful	careful
reasonable	flexible	receptive
sociable	friendly	appreciative

<b>SPONTANEOUS</b>		
RESEARCHER	Educators	TA Trained
affectionate	imaginative	creative
contactful	creative	expressive
creative	zestful	zestful
curious	curious	imaginative
emotional	expressive	curious
expressive	ingenious	ingenious
imaginative	enquiring	emotional
ingenious	affectionate	vulnerable
vulnerable	inspiring	affectionate
zestful	confident	inspiring

<b>COMPLIANT/RESISTANT</b>		
RESEARCHER	Educators	TA Trained
aggressive	withdrawn	defiant
anxious	defiant	rebellious
defiant	inhibited	submissive
inhibited	submissive	inhibited
placating	rebellious	anxious
rebellious	resentful	resentful
resentful	stubborn	stubborn
stubborn	self-denying	withdrawn
submissive	anxious	manipulative
withdrawn	vengeful	self-denying

<b>IMMATURE</b>		
RESEARCHER	Educators	TA Trained
egocentric	infantile	infantile
impulsive	selfish	self-centred
inconsiderate	egocentric	selfish
infantile	reckless	egocentric
over-demanding	inconsiderate	reckless
reckless	self-centred	inconsiderate
self-centred	impulsive	disorganised
selfish	anxious	vengeful
unreasonable	disorganised	aggressive
vengeful	vulnerable	stubborn

These data revealed some interesting nuances of difference in comparison with those on the Word Selection Sheets, which were constructed by totalling the two cohorts' scores for each word. These differences helped to inform the Word Picture selection process. It could be seen yet again from another angle how it was that STRUCTURING and COOPERATIVE Modes failed to show the comprehensive agreement of all the other Modes.

### Quantity and Range of Word Choices

The actual number of words chosen by the judges for each Mode was also important. The following table and diagram summarise the data originally collated onto the Descriptor Sort Data Charts referred to on page 57. There are two separate factors illustrated:

- The differences between how frequently judges chose to describe the Modes (how many 'hits' were made).
- The differences between how wide a range of words was used in the choices for each Mode.

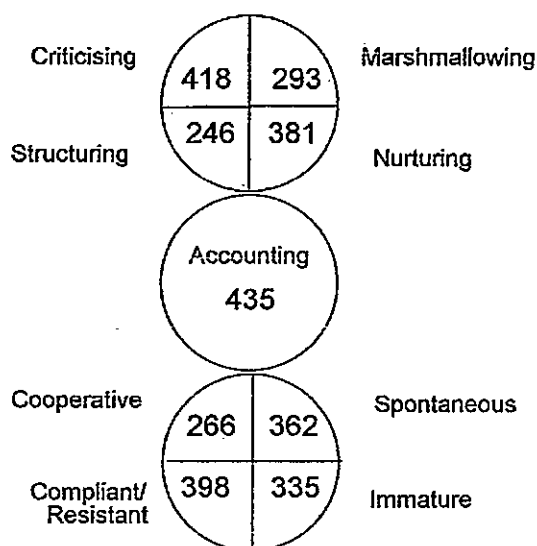
The important ipsative nature of the exercise meant that these comparisons could be made very precisely. The results gave some evidence of both the strength and the breadth of focus given by the judges to the respective Modes, and are illustrated below in a table showing full details.

**Table 3.5. Total and Average Number of Word Choices per Mode by Both Cohorts of Judges**

MODES	EDUCATORS N=18			TA TRAINED N=18			COMBINED N=36	
	Total of word choices	Average	Total of different words chosen	Total of word choices	Average	Total of different words chosen	Total of Word Choices	Total of different words chosen
CRITICISING	219	12.1	31	199	11.0	22	418	34
MARSHMALLOWING	154	8.5	28	139	7.7	21	293	32
STRUCTURING	140	7.7	37	106	5.8	28	246	40
NURTURING	180	10.0	32	201	11.1	28	381	33
ACCOUNTING	211	11.7	41	224	12.4	37	435	47
COOPERATIVE	133	7.4	33	133	7.4	32	266	40
SPONTANEOUS	174	9.6	29	188	10.4	30	362	34
COMPLIANT/ RESISTANT	173	9.6	36	225	12.5	38	398	46
IMMATURE	193	10.7	29	142	7.8	24	335	29
"UNCERTAIN" envelope	17	0.9	14	60	3.3	41	77	49

The totals from the penultimate column in this table are displayed in Figure 3.6 to show the pattern of differences Mode by Mode of the total number of words chosen by the judges.

**Figure 3.6. Totals of Judges' Word Choices, Shown on Functional Fluency Diagram**



Once again STRUCTURING and COOPERATIVE Mode scores were lower than for the other Modes. This meant that judges chose to describe them less frequently, although, as can be seen from the previous table, the actual range of words used to describe them is wider than all the other Modes except ACCOUNTING and COMPLIANT/RESISTANT. (The wide range for ACCOUNTING has been explained above, and the wide range for COMPLIANT/RESISTANT was because of its bipolar nature, explained in Chapter 2.) These results indicated a certain vagueness with regard to STRUCTURING and COOPERATIVE Modes that was another contribution to their lack of differentiation.

The other factor reinforced by these figures was the low score for MARSHMALLOWING. The reason for this again is that of the descriptors available for choosing, there were five that were clearly obvious choices for this Mode. This is discussed on page 61 and can be seen in Figure 3.3. Overview of Mode Descriptors, which shows the very high consensus of the judges on the first five words. Because of this, not so many other words were chosen. The delineation of the construct was therefore very clear but somewhat narrower than for the other Modes.

## Word Picture Selection

The second main aim of the Descriptor Sort exercise was to provide data to enable the selection of the most appropriate descriptors for encapsulating the meanings of the theoretical constructs of the Functional Fluency model (Neuman 1994 p 123). This aim was therefore, in effect, the preliminary stage of test construction. The eventual Functional Fluency Index would consist of nine scales, one for each theoretical construct, or Mode. The scales would be created from behavioural indicators based on sets of descriptors chosen by means of the Descriptor Sort exercise, as outlined above.

There was much consideration about the number of words necessary to make a useful set of words or Word Picture, bearing in mind its purpose. It was important to strike a balance between maintaining the core essence of the meaning of the Mode without diffusing it into vague generalities, and providing a wide enough range of nuances of meaning to give full richness of the construct. On the whole the scoring patterns helped to define the parameters. With only a few exceptions, a suitable range of words emerged clearly from the data. Six was identified as the appropriate number of words, with five being too narrow and seven too diffuse.

The Word Pictures were created by means of:

- Consideration of the Overview of the Mode Descriptors chart.
- Analysis of the Word Selection Sheets.
- Other aspects of the data analysis.

It was essential to have clear criteria for this selection process in order to maintain the validity achieved, while also depicting as accurately as possible the particular nature of the nine constructs in this educationally focused model of human functioning. The following criteria for choices for the Word Pictures were used:

1. To maintain differentiation of constructs.
2. To maintain high agreement with choices made by expert judges.
3. To maintain high agreement with my educational bias of focus for the nine constructs.
4. To achieve fullest possible range of description for each construct.
5. To avoid repetition or overlap of meanings within each word picture.

In examining the data, it became clear that there were two major factors to take into account. Firstly, there were those words that featured high on the two cohorts' lists of the five most chosen words for a particular Mode. This equates with the 'winning' concept of 'first past the post'. Then there were words that had received many votes for a particular Mode, but which either

did not reach the necessary score to be included in the 'first five most chosen words', or did in fact reach the necessary score, but were not included simply because they came further down in the alphabet. They scored highly but didn't 'win'. As in 'proportional representation' in a political voting system, these votes needed to be taken into account, because they were clearly significant. In order to do this, use was made of the Word Selection Sheets, see page 60. On these sheets, information from both cohorts' Mode Data Sheets was combined to show which words scored most highly from a **combination** of the scores.

For each Mode, the selection process then involved amalgamating the two clusters of the five most popular words, and putting the result alongside the combination scores on the Word Selection Sheet. Using all this data, and bearing in mind the five criteria, the six most appropriate words were chosen to make each Word Picture.

For five of the nine constructs this was a simple and logical process, with a clear outcome. Thus for CRITICISING, the descriptors 'dominating', 'fault-finding', 'punitive' and 'judgmental' were obvious candidates, followed by 'blaming' and 'bossy'. The criteria informed the elimination of 'knows better' (covered by others) 'threatening' (better expressed by 'blaming') and 'nagging' (had connotations of helplessness more like MARSHMALLOWING).

For MARSHMALLOWING, the first four descriptors were the obvious ones of 'over-indulgent', 'over-protective', 'over-tolerant' and 'smothering'. 'Spoiling' and 'soft-hearted' were covered by the first four, so to enrich the collection, 'inconsistent' and 'self-denying' were added. 'Placating' was avoided, as it is likely to be a Child Mode manifestation, even when done by someone in a Social Responsibility role.

For NURTURING, it was necessary to bring out specific characteristics of the Mode and avoid the general terms 'comforting' and 'kind'. This left a straightforward list of 'cherishing', 'compassionate', 'empathic', 'encouraging', 'protective' and 'understanding'.

For SPONTANEOUS, there was a clear consensus and suitability of the first six words: 'creative', 'curious', 'expressive', 'imaginative', 'ingenious' and 'zestful'.

For COMPLIANT/RESISTANT, there was a bipolar construct to cater for. Two words were chosen to express the COMPLIANT aspect- 'submissive' and 'placating', and two to express the RESISTANT aspect- 'defiant' and 'rebellious'. The final two words expressed general aspects of negative adaptation, namely 'inhibited' and 'anxious'. Words eliminated were 'withdrawn' (covered by 'inhibited'), 'stubborn' (covered by 'defiant' and 'rebellious') and 'resentful', which would have been useful, but there wasn't room.

The process of selection for the other four Mode Word Pictures was more complex, for different reasons in each case.

For IMMATURE, 'egocentric', 'infantile' and 'selfish' made 'self-centred' redundant, and gave a wider picture. 'Inconsiderate' and 'reckless' enriched the Picture further, and made 'impulsive' unnecessary even though it was a valid choice otherwise. The next word to be considered was 'disorganised'. Investigation showed that of all the ninety words, it was rejected most times (7) into the 'Uncertain' envelope. 'Disorganised' was chosen for IMMATURE seventeen times (out of 36), so that was where it seemed to belong in spite of the dissatisfaction, and some confusion (it was chosen for MARSHMALLOWING four times, and for COMPLIANT/RESISTANT seven times). A solution was created by changing 'disorganised' to 'unorganised', which illustrates more precisely the lack of experience of the infant, who hasn't yet learned how to organise in the first place. This was a researcher-intervention into the process for the sake of clarity of construct.

For ACCOUNTING, 'alert', 'aware', 'evaluative', 'grounded' and 'rational' were clear candidates, 'deductive' being covered by them and therefore not necessary. For the sixth word, the choice lay between 'enquiring' and 'precise', because 'flexible' and 'reasonable' were too general and did not add to the Picture enough. Both 'precise' (meaning 'accurate'), and 'enquiring' (meaning 'investigative') would have been useful additions to the construct of ACCOUNTING. In the end the researcher chose 'precise' because 'enquiring' was rather close to 'curious' in SPONTANEOUS Mode, and the dimension of accuracy in reality-testing seemed important to include.

This left the two Modes STRUCTURING and COOPERATIVE, which were less well differentiated by the judges. It was necessary to construct the Word Pictures so that the bias in the definitions of these Modes empirically demonstrated by the Descriptor Sort Exercise was not maintained throughout the development of the FFI. It was vital that the Word Pictures for these two constructs accurately portrayed the details of the theoretical model, in order that, as a basis for construction of the instrument, they redressed the cultural distortions of understanding to do with authority and socialisation. This entailed several interventions. The first two involved the key descriptors 'helpful' and 'assertive' mentioned on page 70. It was important to have 'helpful' in the Structuring Word Picture to emphasise the beneficial nature of positive control, and to differentiate it clearly from the habitually used concept of destructive negative control in matters to do with authority. In a similar but contrasting way, COOPERATIVE Mode needed an injection of potency

in order to avoid the usual confusion with compliance (Temple 1999). 'Assertive' was the word needed. Cultural confusion can occur over the meaning of the term assertive (Dickson 1982). It is often associated with being pushy or even aggressive, whereas in fact it is about being personally potent and responsible for acting in one's own interests, while at the same time respecting others' boundaries and interests and being willing to behave in mutually advantageous ways. This seems to be the epitome of COOPERATIVE Mode. Weare (2000) emphasises the points made by Fodor (1992) when she writes:

*"In improving cooperativeness, the concept of assertion has proved particularly useful as it provides both a well-thought-through set of principles and some specific skills through which to put these principles into practice" (page 97).*

Assertiveness involves learned social attitudes and behaviour, and comprises the key ability of *"engaging in relationships that are mutually supportive and enlivening"* (Weare 2000 p 97). This ability is best learned by example and experience, for example, through empowerment from an early age by carers in STRUCTURING Mode. There is a strong link between these two Modes. What was needed was to have 'helpful' in STRUCTURING Mode, meaning helpful in the parental role to those being parented, and 'assertive' in COOPERATIVE Mode, to provide the construct with the necessary potency for genuinely 'I'm OK-You're OK' interaction. In both cases these two descriptors' original positions caused some overlap of meaning, so this manoeuvre did comply with Criterion 5 for the Word Picture Selection. This meant that for COOPERATIVE Mode, the words finally selected were 'adaptable', 'assertive', 'confident', 'considerate', 'friendly' and 'sociable', all contributing to what Goleman (1996) termed 'cooperativeness'.

The other intervention was also in STRUCTURING Mode, which as well as having 'helpful' put in, had a word somewhat altered. This word was 'tough', which had connotations of harshness, (five judges put it into CRITICISING), of spunkiness (seven judges put it into SPONTANEOUS) and of hardenedness (seven judges put it into COMPLIANT/RESISTANT). It was changed into 'firm', which maintained its essential sense of stability and strength, while softening the effect so that it was more fully compatible with the meaning of STRUCTURING Mode. The final selection of words for STRUCTURING was 'authoritative', 'consistent', 'directive', 'firm', 'helpful' and 'inspiring'. 'Inspiring' was selected rather than 'dependable' on two counts:

1. 'Dependable' was already covered.
2. There was accumulated evidence from participants in self-esteem workshops over many years, that, for them, the word 'inspiring' was a key one to epitomise the concept of STRUCTURING Mode.



Finally the Word Pictures, six words each, were set out in the Functional Fluency Model formation (see below). They were the foundation for the next stage of the FFI questionnaire development.

Figure 3.7. Combined Word Pictures for All the Modes

**Combination of the Most Chosen & Appropriate Mode Descriptors  
Based on the Data Analysis of the Descriptor Sort Exercise**

**CRITICISING**

blaming  
bossy  
dominating  
fault-finding  
judgmental  
punitive

**MARSHMALLOWING**

inconsistent  
overindulgent  
overprotective  
overtolerant  
self-denying  
smothering

**STRUCTURING**

authoritative  
consistent  
directive  
firm  
helpful  
inspiring

**NURTURING**

cherishing  
compassionate  
empathic  
encouraging  
protective  
understanding

**ACCOUNTING**

alert  
aware  
evaluative  
grounded  
precise  
rational

**COOPERATIVE**

adaptable  
assertive  
confident  
considerate  
friendly  
sociable

**SPONTANEOUS**

creative  
curious  
expressive  
imaginative  
ingenious  
zestful

**COMPLIANT/RESISTANT**

anxious  
defiant  
inhibited  
placating  
rebellious  
submissive

**IMMATURE**

egocentric  
inconsiderate  
infantile  
reckless  
selfish  
unorganised



## GENERATION OF BEHAVIOURAL INDICATORS

Seven groups of people from around the UK and Eire, with varying experience as TA practitioners, agreed to take part in this exercise to generate behavioural indicators, using the Delphi method (Dalkey 1972). This technique, discussed in Kaiser and Woodman's paper (1985) about group decision-making techniques in multidisciplinary teams, is structured and anonymous and can involve many people without them ever having to meet together. This factor was particularly appropriate for this project, given the far-flung membership of the TA community, and the advantages to be gained from involving a large number of experienced TA people in the exercise. As Kaiser and Woodman (1985) make clear, there are several advantages to the method. It is similar to distance brainstorming. However, the small groups are free from whole group influence, and can concentrate on the task in hand without all the extra 'work' of self-management in the group situation. Also, as they explain, "*a major advantage of these techniques is the separation of idea generation from idea evaluation*" (page 463), which can improve the quality of individuals' creativity. Although the Delphi method can be said to be inherently conservative (Haste, Hogan & Zachariou 2001), it is a process that can make maximum use of idiosyncratic information or opinions in the interest of an eventual consensus (Dick 2000).

Four of the seven groups consisted of TA trainees, working in small peer groups of between three and five experienced educators. One 'group' was in fact a pair of experienced practitioners in the fields of education and counselling, with an interest in TA. Another group consisted of four teachers led by an experienced educational TA practitioner and the final group was comprised of five adult education lecturers who were specialists in psychometric testing and who also had some TA training. It would have been useful to have had a group consisting of much younger people to have given a different generational way of expressing the concepts, and also to have had a higher proportion of men, similarly to have given a different gender slant in this creative task. Opportunities to include men and young people were therefore planned in to later tasks of item refinement.

Each group received the following kit, so that they were suitably informed in preparation for the task:

1. Letter with instructions and background to the exercise, together with an outline of the Project.
2. Functional Model diagram.
3. Notes on the 9 behavioural Modes.
4. Combined Word Pictures Sheet.

5. Recording Form.
6. Stamped addressed envelope.

The Recording Form had all fifty four words arranged in alphabetical order, with two spaces beside each one for the sentences to be written out. Each group started off at a different page number, so that their freshness of creativity would start at different parts of the alphabet. The task was to devise two sentences for each word to illustrate the meaning of the word in terms of **behaviour**. Examples were given, and participants were asked to observe the following:

- Use the present tense.
- Make sentences short and simple.
- Use the singular 'person' as the subject, so that both sexes can identify easily.
- Check with the information provided to keep the Mode meanings in mind.

This structuring of the task with regards to format was essential in order to make sure contributions could be easily compared, evaluated and voted upon in the next part of the exercise. Also the material would be more suitable for, or at least easily adaptable into, actual test items. On the other hand, the directions were kept to this simplicity so that participants' creativity was not inhibited by trying to comply with too many requirements. The brainstorming aspect was necessary at this point in order to collect as wide a set of ideas as possible within the framework of the task.

The task turned out to be much more difficult than it seemed at the outset. Two of the seven groups left some gaps, and two more only completed about two thirds of the set of words. This was due both to the size of the task and the length of time needed to complete it. People understandably also found it complex and difficult, especially to make the necessary differentiations between certain of the words. Groups reported much discussion and argument over subtleties and nuances of meaning as well as potential suitability of ideas.

In order to have a complete set of ten sentences for each of the fifty four words, the two incomplete sets were amalgamated, and the remaining gaps were filled by the researcher and a few colleagues. This necessity had some advantage, however, in that it gave an opportunity for first-hand experience of the nature of the task and its difficulties. It also gave an opportunity to fill in with some examples that broadened the range of ideas or conversely epitomised the core construct in question.

The range of words from the Word Pictures of the Modes inevitably contained some whose meaning was somewhat similar, but whose subtle difference of meaning was the key reason for

their inclusion, in order to help differentiate between the nine constructs of the model, and also to give elaborated delineation of each construct. The following were some of the clusters of words which some people reported hard to differentiate:

**Table 3.6. Hard-to-Differentiate Word Clusters**

<b>MODE</b>	<b>CLUSTER OF WORDS</b>		
CRITICISING	blaming	fault-finding	
MARSH MALLOWING	over-indulgent	smothering	
STRUCTURING	authoritative	directive	
NURTURING	empathic	understanding	
ACCOUNTING	alert	aware	
COOPERATIVE	friendly	sociable	
SPONTANEOUS	creative	ingenious	imaginative
COMPLIANT/ RESISTANT	defiant	rebellious	
IMMATURE	selfish	inconsiderate	egocentric

Another possible cultural bias was evidenced in the results of the groups' efforts. It concerned attitudes to children. Sentences illustrating descriptors of negative Modes frequently featured children, while this was markedly less so for some positive descriptors. For instance the ten sentences illustrating the descriptor 'cherishing' included only one about children, otherwise they were about visitors, the elderly, the sick and horses. Cherishing was not something that people in the groups seemed to connect with children. What is more, during a consultation session later about the suitability of the various sentences for conversion to test item questions, the one 'cherishing' sentence about children was greeted with laughter and comments such as "My kids wouldn't have liked that!" The sentence read, "The parent kisses the children warmly before they leave for school".

## **SELECTION OF APPROPRIATE BEHAVIOURAL INDICATORS**

When the five sets of pairs of sentences (behavioural indicators) were complete, they were collated onto a Behavioural Indicators Voting Form, with all ten sentences listed under each word with a space for recording preferences. A complete Voting Form was sent to each of the contributing seven groups for the second half of the Delphi exercise. The task this time, for each

group, was to take each word in turn with its set of ten sentences and vote for the two sentences considered to best capture the meaning of the word in behavioural terms.

When these data were returned, they were collated onto tables and the scores totalled. These totals showed the preferences for all the sentences. The maximum possible vote for any one sentence, given that the seven groups had two votes for each set of ten sentences, was seven, but in fact no sentence earned that score.

Out of the five hundred and fifty four sentences in fifty-four sets of ten, only two earned 6 votes, and thirteen earned 5 votes. In six of the sets, two sentences scored a 5 and a 4 or two 4s, preferences were otherwise surprisingly varied and fairly evenly spread. Indeed for seventeen of the sets no sentence scored more than 3 out of the possible 7 votes, while at the same time only in ten sets did four or more sentences fail to score any votes at all.

This meant that the voting groups considered that a wide range of the material was suitable for encapsulating the meanings of the words (the Mode descriptors), and there was therefore a generous resource of potentially usable material for item development. Whereas at first sight the lack of clear 'favourites' in the sets of ten sentences seemed problematical - how to decide which sentences to select for item development - in practice, it was an advantage. The voting groups' preferences became one of the criteria for item selection, see the following page, and for many sets of words it meant there was a wealth of suitable material from which to draw. The most important factor was that this resource would remain available during the whole process of item refinement when inevitably at a later stage substitute or extra items would be needed. As Lanyon and Goodstein (1997) advise, it is good practice to start test item construction with double the number probably needed.

## **DESIGN OF THE FFI QUESTIONNAIRE**

The Functional Fluency Index was designed as a paper and pencil self-report questionnaire. This was considered appropriate for the sort of population for which the instrument was intended, i.e. relatively able, literate and capable of self-reflection. A high degree of response structure was needed in order to obtain as precise a score as possible on the nine constructs. This was in turn to give a clear framework on which to base a much more fluid, flexible and open-ended feedback.

The formulation of test items depended on several test design decisions, in particular the choice of item format and scoring method. The FFI needed to stimulate focused self exploration, so the vividness of direct personal questions was chosen as the item format. This decision

influenced the choice of scoring method.

There were other factors to take into account. The term 'Index' in the FFI's title pointed to the fact that the instrument was constructed from a set of related measurements or scales. The variables to be measured in this case were the fifty-four descriptors that delineated the nine constructs of the theoretical model. They were "*continuous variables*" (Neuman 1994 p 136) having an infinite number of values that flowed along a continuum. The nature of the conceptualisation of these variables affected the level of measurement that could be used and therefore the degree of precision possible. Thus only ordinal level was feasible for the FFI, with the scores denoting ranked degrees of difference, or ordinal estimation (Nunnally 1978).

A 6-point Likert scale was chosen as the scoring method for simplicity and ease of use. This meant that relevant scores could be added to give scale totals, and, most importantly, respondents could choose a strength and nature of response as accurate as possible. This is a sensitive matter. Questionnaires are notorious for eliciting in respondents an overriding desire to put the answer, "It all depends....". The aim with the FFI design was to offer as much scope as possible for differentiation of response, while keeping within the optimal limits for reliability quoted by Nunnally (1967 p 521) cited in Neuman (1994 p 153). Nunnally suggests that reliability in Likert type scales levels off at about seven points of scale response, having increased from two points upwards. Choosing the even number of six response options avoided the pitfall of having a neutral centre option as a way for respondents to opt out of making a decision in one direction or another.

Likert scales commonly ask people to choose their response in terms of frequency, agreement, liking, approval etc. None of these seemed to fit the need of the FFI, however. As stated above, direct personal questions were chosen as the test item format, the aim being to stimulate active curiosity and focussed self-reflection. With this in mind it was decided to ask respondents how **likely** it was that they would do a certain action. Thus any response would contain an element of flexibility, and the trap of having absolutes at the ends of the scales, (such as 'always' and 'never'), which people often find off-putting, would be avoided. Estimating 'likelihood' was therefore a way of expressing the necessary conditionality that people want in their answers. An example question could be: "Would you usually rush to answer the phone?" The scale of options of likelihood is as follows:

Extremely likely	Likely	Slightly likely	Slightly unlikely	Unlikely	Extremely unlikely
------------------	--------	-----------------	-------------------	----------	--------------------

Respondents would simply be asked to tick one of the six options.

## CREATION AND VALIDATION OF TEST ITEMS

To eliminate systematic error as much as possible in terms of the actual item creation, careful attention was given to wordings and implications of meaning (Neuman 1994 p 140). First of all, the selection of sentences to transform into the question format of the test items was made according to the following criteria:

- Take into account the popularity of sentence with voters.
- Eliminate specialist or highly unusual contexts, vocabulary or repetition of a context, e.g. gardening, parenting, seaside.
- Avoid overlap of expression of meaning.
- Maintain wide span of expression of meaning of the descriptor in question.
- Avoid dramatically distracting material likely to interfere with test-takers' concentration.

The impersonal sentences, with 'the person' as the subject, were changed into direct questions designed to invite subjectivity from respondents, see the example above. This simple format of "Would you do such-and -such?" was chosen, with a few variations, which were mostly to do with reducing the social undesirability of particular items by softening the impact, e.g. "Might you do such-and-such?" Matters of design were intended to help respondents engage directly with the dynamic of reflection and answer, with as few irritations as possible. In terms of language forms, the following criteria were used:

1. Use simple language, specific and unambiguous, (aim for readability for 11 year-old level to increase applicability and shorten test time).
2. Keep content up-to-date, non-technical and unlikely to date quickly.
3. Avoid jargon, slang and colloquialisms, (to increase cross-cultural translatability).
4. Avoid value judgements, assumptions or bias with regard to gender, race, age and disability.

These criteria are consistent with the latest improvements to the widely used 16PF Questionnaire (Conn & Rieke 1994).

Other important further principles addressed were:

- To keep the chosen four questions for each word cohesive in terms of expression of meaning, while also 'tapping diverse content' (Conn & Rieke 1994).
- To reduce motivational distortion by the avoidance of the obviously socially desirable/undesirable.
- To avoid items with the likelihood of extreme frequency endorsement to help avoid skewness (Lanyon & Goodstein 1997 p 361).



With careful precision with regard to differentiation of meanings (see page 81 for details of the clusters of similar words), the aim was that items would finally correlate and load more highly with their own construct (Mode) than with any of the other constructs.

Adhering strictly to all these principles, four sentences out of each set of ten for each word were transformed into test item-style questions. This made a total of two hundred and sixteen provisional items. They were "*representatively and comprehensively covering the universe of content*" (Lanyon & Goodstein 1997 p 361) of the TA nine construct ego state model. The list of questions was put into a randomised order by allocating each one a randomly selected raffle ticket number and then doing a computer sort.

In order to assess the individual items' match with the constructs they were derived from and were intended to test, a Test Item Validation Exercise was undertaken using thirty expert judges. This exercise was a major component of the rational/intuitive strategies (Lanyon & Goodstein 1997) employed for the test construction in this study, see the beginning of this chapter. As before, the exercise was structured by the theoretical imperative that underpins the whole study.

### **Test Item Validation Exercise**

This was a sorting exercise with a difference. It had two aims, - firstly to collect and collate the judges' views on the matching of the items to the constructs, and secondly to gain a preliminary survey of suitability or otherwise of items with regards to comprehensibility and acceptability in a broad sense. Whereas the Descriptor Sort exercise only required judges to decide which descriptors described which Modes, this time judges had to work out for each item the Mode they thought the item would be testing when being answered by test-takers. This required the application of their specialised theoretical knowledge together with sophisticated language skills and a lively intuition.

The thirty judges for this exercise were people who had already been involved in the Descriptor Sort or Generation of Behavioural Indicators exercises. As described previously, they were educators, psychotherapists, organisational consultants and trainers with an advanced level of understanding of TA theory and practice. They came from the north and south of Scotland, the north west of England, the East Midlands, London, the Southwest and southern counties. They were contacted by phone in the first instance to outline the task and check if they were willing to be involved further. It was deemed desirable to use these people as expert judges on this occasion as their previous experience would be likely to enhance their expertise in terms of their familiarity with the constructs of the model and the process of the test construction so far. They

would be more likely to achieve the precision of judgement required to make the exercise worthwhile.

Each judge received a randomised list of the two hundred and sixteen questions, see Appendix C.1. Beside each question the nine Modes were written out, and judges were asked to ring the Mode they considered the question was addressing, and to do this for all the questions.

**Table 3.7. Test Item Validation Exercise Example**

19	Would you buy your child whatever he or she asked for?	Criticising	Marsh-mallowing	Structuring	Nurturing	Accounting	Cooperative	Spontaneous	Compliant/Resistant	Intimate
----	--------------------------------------------------------	-------------	-----------------	-------------	-----------	------------	-------------	-------------	---------------------	----------

As well as the Form to work on, judges were also provided with the following:

- An explanatory letter and a set of instructions.
- Behavioural Modes diagram.
- Notes on the Behavioural Modes.
- Word Pictures sheet.

The last three items were included to support and enhance their expertise.

A pilot run of the exercise with a couple of the judges made it clear that it would be a good idea to include further instructions in the form of a hand-written note of advice. This note exhorted the judges to resist being seduced into considering the questions in the personal and subjective way invited by the nature and style of the question construction. Instead, they were asked to concentrate on considering objectively which Mode they thought each question was targeting in terms of the future test-takers, before ringing that Mode, see above.

Though this exercise was simple in conception, it was actually difficult to do. The results, however, exceeded the expectations, and in fact the aims were more than fully met. Though an aspect of the value of the results was quantitative, to do with the hard facts of scores, the far greater value turned out to be the qualitative richness of information provided by the range of responses from the large number of judges.

Of the thirty judges, twenty-two returned results on time, and many of them contributed comments as well as their completed forms. These comments were all noted item by item and then collated onto a template. Two of the forms turned out to have been done in a rather random and cavalier fashion and though this was not without its useful information, see below, these forms

were not included in the collation of scores. They counted as spoiled papers. So the actual number of judges whose work was used in the data analysis was twenty.

### **Test Item Validation Exercise Results**

Results were carefully recorded and tallied so that they could be considered with respect to individual and collective judges' decisions, as well as Mode and item allocations. The Test Item Validation Exercise Results document (Appendix C.1.) shows the totals and provides the item numbering information referred to in the following sections.

These results proved invaluable for the process of item development. Perhaps because of the particular demands and difficulties of the exercise, the data produced were very variable, both between judges and within some judges' set of responses, where it seemed that concentration must have slipped temporarily. This became easier to identify having checked and tallied the couple of returns (see above), which were counted as 'spoiled papers'. They showed up the difference between random allocation or actual mistakes (e.g. two Modes ringed on one row and the next row missing), and choices which were very different from what most people had put, but which seemed to have a legitimate logic of their own. The latter type of response was invaluable in giving the alert to ambiguities and items that might be misunderstood.

On the whole, the results were reassuring in that a majority, just over two thirds, of the two hundred and sixteen items gained 70% or more agreement as to which Mode they were designed to test. In fact forty-seven items, nearly a quarter of the total, gained more than 95% agreement. At the other end of the spectrum, only twenty-three items, just over one tenth, gained less than 50% agreement. Two items had 30%, the lowest, and five had 35%. These seven items seemed to fit very well to several of the Modes and were thus shown up to be quite inadequate, in their current form at least. (N.B. Appendix C.1. lists all the items referred to in the following discussion).

There were two main aspects of the results, the matter of degree of consensus, and then the matter of variety of consensus. These two perspectives, quantitative and qualitative, each provided rich sources of interest to take into account in the process of item refinement. It was the nature of the agreement or lack of it (the quantity, range, combinations and contrasts) which gave clues as to the subtle differences of meanings that the items had had for these expert judges, and which therefore illuminated the potential suitability or unsuitability of the items. Working out the meanings of the clues provided indications of how to improve the items.

To make use of this complexity it was necessary for the analysis of the results to become the structure for the systematic refinement of the test items.

## General Observations About the Results

It seemed from the results that the four negative Modes were more discrete and easily identifiable than the five positive Modes. This could be because they emanated from less integrated psychic material, whereas the five positive Modes manifested more integrated material, see rationale in Chapter 2. It became gradually clearer that ACCOUNTING seemed linked to effective mature functioning in all positive Parent and Child Modes, i.e. STRUCTURING, NURTURING, COOPERATIVE and SPONTANEOUS. It seemed as though those Modes were difficult unless you were ACCOUNTING as well. This is what is meant by Integrating Adult ego-state functioning (Temple 1999). This matter is discussed in connection with test design decisions to do with the possible need for weighting of index scales (see below).

Several judges commented that doing the exercise was diagnostic, in terms of ego states, for the doer of the exercise. When they failed to keep objective and consider the Mode probed by the question, they said, their subjective association of the question with a Mode (because of trigger words or assumptions perhaps) revealed their contaminated beliefs in action. An example of this was that one judge placed Question 39, 'If you witnessed a mugging, would you take command and order the attacker to stop?' into SPONTANEOUS Mode instead of STRUCTURING, in spite of having the Word Pictures to refer to. The sense of energy and action required made this judge think of the spontaneity of the positive Natural Child Mode. She ignored the fact that the action fitted more appropriately to the authority and directiveness of STRUCTURING, which was where 16 of the final total of 20 judges had put it.

Judges occasionally mentioned in their comments that, having done the exercise, they had found the exploration of and concentration on the meanings of the Modes personally beneficial. One judge related how, having realised the benefits and positive reality of STRUCTURING Mode, she had suddenly recognised the way in which, professionally, she was accustomed to MARSHMALLOW colleagues and clients. This realisation stimulated her into changing some of her ways of manifesting her leadership role at work, with benefits all round!

The results showed that TA clinicians, used to ongoing diagnostic thinking (tracking evidence of pathological beliefs) were inclined to be more accurate in their Mode recognition with respect to socially negative behaviours than with positive ones. They also appeared to associate positive and appropriate behaviours rather generally with ACCOUNTING Mode, thus not making clear conceptual differences between the five positive Modes. This echoed the similar results from the Descriptor Sort Exercise. For instance:

- Q 86 was put as ACCOUNTING instead of COOPERATIVE.
- Qs 96 and 195 were put as ACCOUNTING instead of STRUCTURING.
- Qs 11 and 125 were put as ACCOUNTING instead of NURTURING.
- Qs 42 and 178 were put as ACCOUNTING instead of SPONTANEOUS.

Those judges with the traditional TA training were inclined to respond and judge according to TA stereotypes (triggered perhaps by the use of a particular word or phrase) rather than the precise meaning of a question. For example:

- Q 89 had a trigger word 'comforting' and this was put as NURTURING by eighteen out of twenty judges, regardless of the fact that the behaviour in the sentence was about needing nurturing.
- Qs 167 and 201 had the words 'relaxed' and 'party' in them respectively, and both items were put as SPONTANEOUS, missing what the question was actually asking, which was actually to do with COOPERATIVE Mode.

On a few occasions, clinicians diagnosed a behavioural Mode as an ego state by jumping to conclusions using this sort of stereotypical thinking. For instance, in Q 77, the phrase "spot a mistake" triggered a quick assumption that the Mode was CRITICISING, whereas the actual question "Would you spot a mistake in the typing?" is about ACCOUNTING. Spotting something does not necessarily mean fault-finding or blaming. This is an example of the usefulness of having this pointed up, however, because of course many people might associate the word 'mistake' with something to do with criticism, so this is a case of an item needing improvement.

At a more complex level of the same issue, in Q 94, a couple of judges ascribed to CRITICISING Mode an IMMATURE egocentric behaviour which would indeed be likely to be manifested by someone in a tyrant-like Parent ego state. "Would you be inclined to see things only from your own viewpoint?" In doing this they were leaping ahead mentally to the ego state diagnosis and not doing the actually simpler task of ascribing the behaviour to the appropriate Mode (Cox 1999).

Occasionally there were slips into marking what the person in the question seems to be lacking rather than what they're actually exhibiting! For example, in Q 102, two judges assigned the item, "Would you find it hard to keep a handy pen by the phone?" to STRUCTURING and ACCOUNTING respectively, rather than IMMATURE 'unorganised'.

Above all, the various aspects of the results provided a stimulus to question, analyse and review the efficacy of the items in terms of their effectiveness in testing the constructs of the

theoretical model. What was important for the researcher was to keep an open mind about all the judges' responses and review them objectively with respect to what light they might throw on the task of item refinement.

### **Results Analysis as a Basis for Item Refinement**

First of all it became clear that there were some generalised basic tasks of refinement to undertake. The first three of these needed to address improvement of clarity in terms of TA theory. The last three needed to address principles of effective psychometric test construction (Lanyon & Goodstein 1997):

1. Ensure that the forty-eight Parent items do relate to manifestations of authority and or responsibility for self or others.
2. Ensure that the forty-eight Child items evoke peer relationships and/or the manifestation of subjective or emotive self-expression. For instance, change words to ones that are more affective like 'fascinated' instead of 'interested'.
3. Ensure that the twelve ACCOUNTING items do not evoke personal affect or interpersonal dynamics. For instance, change emotive words like 'appreciate' to 'note'.
4. Tone down or alter those items that would seem to be likely to attract too high a negative or positive response endorsement, for instance the item about comforting the distressed children. These were likely to be associated with high or low social desirability. Furnham (1986) in his study of response bias, social desirability and dissimulation, explains that appropriate item design must take into account a variety of factors to do with these issues. There are no clear-cut rights and wrongs. There needs to be a balance between having an item that clearly tests the relevant behaviour pattern and one that is subtle in its formulation, particularly important in the case of the negative Parent Modes. In order to subtly allow for positive intention as an aid to honesty through face-saving, Lanyon & Goodstein (1997) suggest "*rewording to express the same meaning in less extreme forms*" (page 362). A basic example of this was to change the verb from 'would you' to 'might you', as in "Might you say no one minute and yes the next....?"
5. Allow or even introduce an element of ambiguity in certain items so that in fact it is more likely that a respondent will answer more accurately from their own personal viewpoint. For instance, one of the items for 'evaluative', "Would you compare the results with those of previous years in order to come to a conclusion?"
6. Avoid/alter context specific items, for instance an item about a particular situation with a pet. This could be meaningless for many respondents.

Information was accumulated from individual judges' comments, from study of individual judges' results and from study of the judges' collated results, i.e. the totals of choices item by item and Mode by Mode. The last of these three sources revealed that there were six categories of results for the items. In order to describe these simply, the terms 'right' and 'wrong' will be used. Allocation to the 'right' Mode means that judges chose the Mode for which the item had been intended, and allocation to a 'wrong' Mode means that they chose one of the other eight Modes. Of course, in actual fact there was no right or wrong in terms of answers because what was being asked of judges was their opinion, and the reality was that occasionally their 'wrong' choices were more appropriate than the 'right' one. The task was to gather meanings and implications and convert them into ideas for improvement of items.

### **Categories of Results with Commentary on Each Category**

- High agreement for the right Mode for items which seemed highly appropriate.
- High agreement for the right Mode for items which were not appropriate.
- High agreement for a wrong Mode.
- Less than 70% agreement where consensus was split clearly between two Modes.
- Less than 70% agreement where one Mode was chosen by just over half the judges, and other choices were scattered.
- Less than 70% agreement where at least three Modes were chosen for an item.

#### **High agreement for the right Mode for items that seemed highly appropriate.**

An example of this is item 61:

"Would you give yourself a hard time for failing to solve the problem?"

Nineteen of the twenty judges chose CRITICISING as the Mode for this item, which is the Mode for which it was written - they chose the right Mode! This item meets all the criteria and so it will go forward, as it is, onto one of the questionnaires.

#### **High agreement for the right Mode for items which were not fully appropriate.**

Examples of this are items 19, 28, 84, 126, 150, 154 and 156. Mostly these were too crudely obvious and would be likely to invite too high or too low a response endorsement. For example:

"Would you stay with the distressed children until they are comforted?"

This was rightly judged to be for NURTURING Mode, but as it stands would be too obviously desirable to be of much use, so an idea for improvement would be to exchange 'distressed' for the harsher reality of 'miserable and howling' in order to test someone's tendency to nurture.

### **High agreement for a wrong Mode.**

Examples of this category were puzzling. It was not altogether clear whether it meant that there was some fundamental flaw in the item or not, as in item 1:

"Would you ask for feedback as to why you were not appointed for the job?"

This item was written for COOPERATIVE Mode, to test assertiveness, but only one judge put it there. Did the nineteen others simply associate asking for feedback with the data-processing function of ACCOUNTING Mode, which they then chose, not looking at the word picture for ACCOUNTING, which is 'alert', 'aware', 'evaluative', 'grounded', 'precise' and 'rational'? Or perhaps that question simply does not imply assertiveness, and a new item is needed? Or perhaps the item is actually fine, and what we have played out is another example of the 'invisibility' of aspects of positive adaptation like assertiveness, which was demonstrated during the first Descriptor Sort exercise? The question is what should be done about the item? If this is part of the cultural distortion discussed in Chapter 2, then it might be appropriate to leave the item in as it stands. Expert opinion was sought as to the matter. The final decision was to leave the item as it stood.

Another example was item 89: "Would you really want a comforting warm drink to help you recover from a stressful time?" Eighteen judges put this in Nurturing, which meant that they hadn't read the question, see also discussion on page 89. A re-emphasis could be achieved by writing "Would you really want to be given a warm.....etc?" This might make sure that the question really addressed what was intended, which was the 'infantile' aspect of IMMATURE Mode.

Altogether there were between twenty and thirty items in this category, which proved very significant as a source of information about possibilities of what the items might be actually testing. An example is item 25. "Would you stick the jar labels onto the lids, so that they could be read when stored in a drawer?" It was intended for testing SPONTANEOUS 'ingenious', but twelve judges put it in ACCOUNTING, and six in STRUCTURING. Apart from the fact that judges thought the item obscure and odd, their placing caused much consideration about how appropriate 'ingenious' was as a descriptor for SPONTANEOUS Mode. The other items for 'ingenious' were reviewed, their problem-solving nature was noted, and the issue was recorded for later consideration in the process of test refinement after the pilot analyses. For item 27, it was different. Here it was likely that the vocabulary used evoked the 'wrong' Mode judgement. "Would you hold steady at a time of conflict?" It was the 'hold steady' which made half the judges put the



item into STRUCTURING Mode instead of ACCOUNTING 'grounded'. This was noted, and the wording changed to 'keep your wits about you', which would test more accurately for 'grounded'.

**Less than 70% agreement where consensus was split clearly between two Modes.**

This category sometimes demonstrated the closeness of meaning of two descriptor words even when they belonged to different Modes, and therefore how accurate the questions needed to be to differentiate between them, for example item 139: "Would you assure people that they can do really well and succeed?" Half the judges put STRUCTURING and the other half put NURTURING. Either could be right in fact, though the intended Mode was STRUCTURING, 'inspiring' being the descriptor word. The judges who put NURTURING were thinking of the word 'encouraging', which is part of the word picture for that Mode, so what is necessary is to make the question more energetic and less comfortable. A simple change of verb might accomplish what was needed - thus: "Would you convince people that they.....?"

Another factor this category demonstrated was a lack of clarity in some items with respect to generational or social roles or contexts. For example, item 56: "Would you welcome the new person into the group?" This was meant to be COOPERATIVE 'friendly', which was where eight judges put it, but twelve judges put it in NURTURING. In order for there not to be a responsible caring element implied, the peer social context has to be emphasised, so that it would be more clearly testing 'friendly' COOPERATIVE, thus: "Would you welcome the new neighbours with a card or a visit?"

**Less than 70% agreement where one Mode was chosen by just over half the judges, and other choices were scattered.**

This category seemed to indicate that the item was badly flawed. For example item 7: "On discovering sweets stolen by your ten-year-old, would you then go back to the shop yourself to return the goods and apologise?" Twelve judges did put MARSHMALLOW, which was 'right', but the rest of the judges chose five other Modes between them. Not only was this question long and complex, but it implied values and motivations that were not clear. This was an item to be replaced.

Another example was quite different. This was item 97, which was designed to test 'inconsistency'. It did this, but not in the terms of the use of that concept with regards to negative caring Mode MARSHMALLOWING. In fact there was no indication of any responsible caring element at all, negative or otherwise, (see example in Category 4 above as well): "Would you sometimes walk on the right hand side of the lane and sometimes on the left?" This must have

seemed quite skittish or playful, because twelve judges put it in SPONTANEOUS, whereas the rest of them scattered their choices round four other Modes. The issue of the need for items testing the Parent Modes to make the responsible social role clear is noted as one of the general basic tasks of refinement on page 90.

**Less than 70% agreement where at least three Modes were chosen for an item.**

Eleven items fell into this category, seemingly for a variety of reasons. The terms vague, obscure and ambiguous seem to apply to most of them. A good example of this was item 148: "Would you speak to a large gathering of people with humour and certainty?" STRUCTURING, ACCOUNTING, COOPERATIVE and SPONTANEOUS were all chosen with some legitimacy. This item would need considerable adjustment in order clearly to test for COOPERATIVE 'confident', as was intended.

Item 42 was different. It was rather exciting and clearly triggered a whole variety of responses from judges, and would therefore seem to be rather unreliable: "Hearing the stair creak, would you think of all sorts of reasons for the noise?" There is a scariness in this that evokes 'anxiety', COMPLIANT/RESISTANT, whereas the words 'think' and 'reasons' could be about ACCOUNTING. It was meant to target SPONTANEOUS 'imaginative', which is what seven judges did put, but in order to make it more effective, this adjustment was made in the first instance: "Hearing a little squeaky sound, would you conjure up lots of ideas for what it could be?" Later this was adjusted still further to reduce the possibility of anyone imagining something like mice, which would cause other difficulties! The final form was "Hearing an interesting sound, would you.....".

### **Item Refinement Process**

In effect this process started with the selection of the four sentences out of each set of ten from the behavioural indicators material generated by the seven groups. The next step was the transformation of these into the formula questions ready for the Test Item Validation Exercise. This exercise produced the wealth of material described above with which to embark on the main refinement process. This process had to answer the following questions:

- Which items seemed fine as they were?
- Which items needed the sort of minor adjustment such as a change of a word or emphasis?
- Which items needed reslanting or more major rewording?
- Which items needed to be replaced?

First of all the two hundred and sixteen selected items were divided into two parallel lists, A and B. The Functional Fluency Index Questionnaires A and B would therefore have a total of one hundred and eight items each. At first it was assumed that it would be necessary to work only on one questionnaire, List A, in preparation for the piloting of the instrument, keeping the List B items in reserve. However, this seemed not only unnecessary but in the long term ill-advised. It was easier to sort out two good lists in parallel at the same time than it would be to do it twice separately, especially as it was an aim of the project to have the flexibility of two parallel questionnaires to use for the declared purpose of the instrument.

The two lists A and B were each organised into a nine-page document, one page per Mode, with two items beside each of the six descriptors. These working drafts were systematically altered and updated as improvements were made. The criteria for the sorting of which items were to go in either List A or List B was as follows:

- The pairs of items for each list would give range of focus and subject by using complementary contexts, e.g. domestic / employment, urban / rural, gender roles, so that each list had a similar range.
- The pairs of items would be matched for effectiveness, potency and style.

Copies of the two lists were sent first of all to a pair of expert judges with experience of editing and language development for checking with regard to these two criteria. On their advice, one or two items were moved from one list to the other. For example: both the items for COOPERATIVE 'friendly' on List A were about greeting people, so one of these was exchanged with the one on List B that was about waving to people on passing steamers, to give some variety.

#### **Criteria for refinement**

The criteria for guiding the ongoing improvements were the same as those previously cited, and are repeated here in combination. There are three different sets. The first two follow recent psychometric literature (Conn & Rieke 1994, Lanyon & Goodstein 1997), and the third comes from the theoretical imperatives of the TA theory underpinning the study:

##### Set 1 Criteria

1. Use simple language, specific and unambiguous, (aim for readability for 11 year-old level to increase applicability and shorten test time).
2. Keep content up-to-date, non-technical and unlikely to date quickly.
3. Avoid jargon, slang and colloquialisms, (to increase cross-cultural translatability).
4. Avoid value judgements, assumptions or bias with regard to gender, race, age and disability.

### Set 2 Criteria

1. To keep the chosen four questions for each word cohesive in terms of expression of meaning, while also 'tapping diverse content' (Conn & Rieke 1994).
2. To reduce motivational distortion by the avoidance of the obviously socially desirable/undesirable.
3. To avoid items with the likelihood of extreme frequency endorsement to help avoid skewness.

### Set 3 Criteria

1. Ensure that the forty-eight parental items do relate to manifestations of authority and or responsibility for self or others.
2. Ensure that the forty-eight child items evoke peer relationships and/or the manifestation of subjective or emotive self-expression. For instance change words to ones that are more affective like 'fascinated' instead of 'interested'.
3. Ensure that the twelve ACCOUNTING items do not evoke personal affect or interpersonal dynamics. For instance change emotive words like 'appreciate' to 'note'.
4. Tone down or alter those items which would seem to be likely to attract too high a negative or positive response endorsement, for instance the one about comforting the distressed children. These were likely to be associated with high or low social desirability. In the case of the negative Parent Modes, subtly allow for positive intention as an aid to honesty through face-saving.
5. Allow or even introduce an element of ambiguity in certain items so that in fact it is more likely that a respondent will answer more accurately from their own personal viewpoint.
6. Avoid/alter context specific items.

All this guidance was put together with the learning from the Test Item Validation Exercise, and used in the consultations for item refinement. A series of five meetings was arranged for people of differing professional backgrounds, for example mental health, engineering, education, and of different ages, to read through the items, indicating any which seemed confusing, 'quaint' or old-fashioned, obscure, offensive or otherwise of doubtful value. Suggestions were collected for improvements, and new drafts were prepared.

### **Issues in refinement**

In particular, it was important to simplify sentence construction whenever possible to shorten and clarify the item. For instance: "Would you notice what the new fashions are?" was changed to: "Would you notice what's in fashion?" Even small changes like this made the items easier to

read, understand and answer for test-takers. This change also made the question somehow more general and therefore more useful as an item.

Subtle refinements sometimes helped to differentiate more clearly between constructs. The item for testing 'inspiring' STRUCTURING started out with "Would you encourage someone to.....?" In several stages, this was changed to "Would you give someone the boost they need to.....?" Here 'encouraging someone' was made more dynamic and empowering. It was originally too like NURTURING and needed more energy expressed in order to connect with the inspirational aspect of STRUCTURING Mode.

For one or two items, a substitution of a new question along the same lines seemed to solve the problem of complexity and confusion. For example, there was an item for MARSHMALLOWING 'over-indulgence': "On discovering sweets stolen by your ten year old, would you then go back to the shop yourself to return the goods and apologise?" This was selected for this Mode by eleven judges, but also chosen for five other Modes. It was rewritten from another idea from the pool of group-generated sentences: "Would you tend to excuse the bad behaviour because the youngster had a difficult home life?" In this case the solution also removed an item which seemed to assume that respondents had children of their own.

The use of 'always' and 'never' seemed to detract from an item's accurate expression of a positive Mode, presumably because such absolutes are seldom possible and often indicate contaminated thinking. They might be connected with obsessional behaviours. For example: an item for STRUCTURING 'consistent' was originally "Having decided not to buy certain goods, would you then always avoid them?" This was changed to "Having decided not to buy certain goods on principle, would you then make sure that you did in fact avoid buying them?"

This last point links in with the issue of 'trigger' words which, as had been indicated by the expert judges, were likely to invoke stereotypical responses and side-track test-takers away from the actual meaning of the question. For instance most items with the word 'party' in them were altered to address the required Mode descriptor more precisely (again using material from the pool of group-generated questions). An example was the item for COOPERATIVE 'sociable', "Would you be relaxed and easy at a party?" It was replaced by "Would you enjoy meeting lots of new people?" Another one for SPONTANEOUS 'zestful' was changed from "Would you invite everybody to a party to celebrate your success?" to "When people are flagging, would you create a zoom of energy to liven them up?" Other 'trigger' words that had to be reconsidered were 'dare', 'win' and 'mistake'.

Sometimes tiny changes helped to refine the item in question. For instance, changing the definite article 'the' to the indefinite 'a' could make a question subtly more general, thus widening the way it could be envisaged, for example: "Would you give yourself a hard time for failing to solve a problem?"

In terms of grammatical accuracy and clarity, the issue of 'he and she' and a choice of possessive pronouns was difficult to solve. It was decided to avoid gender bias and clumsiness of expression as far as possible by using a variety of strategies. For instance: alternating he and she, using the terms child, partner, a plural subject, and occasionally, where it would sound least incorrect, using 'them' or 'their' following a singular subject, were all used where most appropriate. This policy was flagged up explicitly on the instructions page at the start of the questionnaire document to reduce the possibility of irritation for test-takers.

In the process of the consultative meetings, there was discussion about the fact that many questions involved matters of interaction between adults and children. At first efforts were made to reduce the number, until it was realised that in fact such questions were inevitable and necessary with respect to the underpinning theoretical model. The Functional Fluency model of human functioning in terms of growing up, up-bringing and survival, as discussed in Chapter 2, is indeed about the interrelations of 'self' and 'self-as-parent', both internally and interpersonally, whether one is actually a mother or father or not. The sets of FFI test items addressed these basic aspects of being human, being a social animal, which learns how to parent mainly from experience and example. Everyone has experience of child-care, if only one's own, and therefore some views about it. At a certain age, varying from culture to culture, people take on adult responsibilities for being in charge of themselves, and for most people from then on there are at least some occasions when 'being in charge' is also a social role vis-à-vis others. For many people this social responsibility is experienced also in terms of parenthood, and for some people it is also a vital aspect of their working lives, e.g. teachers, social workers, police officers, managers etc. A few people might think, "These questions don't apply to me because I'm not a parent, or because I don't have a partner". However, in terms of relevant experience, most people can draw on their personal history of growing up and being brought up, and imagine what they might do or not do in a particular situation involving children or family life. An important task would be to convince test-takers that such questions held relevance for them even if they were childless, single, homosexual and/or had nothing much to do with children in everyday life. Consideration was given as to how

to alert people to this point of view in the questionnaire introduction and instructions. Pilot Study evaluations would give information as to whether people found the issue a problem.

### **Questionnaire drafting**

This refinement process produced four drafts, after which it was decided that the lists were good enough to be used in the Pilot Study, and that further refinement would be made as a result of the data collected in the Study.

Final versions of Lists A and B were copied out so that they were in identical order in terms of which descriptors they tested. The order of the two lists was then randomised. This was done by first allocating a number between one and one hundred and eight to the questions, by drawing raffle tickets blindly from a box. The lists were then computer sorted. This meant that the same scoring mechanism could be used for the two parallel questionnaires Form A and Form B.

To provide the necessary data for creating the computer scoring programme later, a list was generated showing each item number with the Mode and descriptor that it tested. (This list was the same for each form.)

## **CONSTRUCTION OF THE FUNCTIONAL FLUENCY INDEX**

It was important that the design and format of the questionnaire manifested the philosophy and principles of TA. Thus, questionnaire completion would, in itself, aid the growth of self-awareness and understanding essential in a tool for personal development. This meant that the instructions, examples and layout were designed to be user-friendly, helpful, and explicit with no tricks. The underlying messages in the style were intended to promote confidence, openness and positive motivation to engage wholeheartedly in the exercise. "It's OK to be human; good enough is good enough; you can do it; you can think and decide for yourself; it's OK to make mistakes". Test-takers were therefore to be offered 'protection' through careful administration of the test affording confidentiality and moral support. They were to be offered 'permission' to do well, to relax and feel OK to be themselves and take advantage of the learning on offer. Lastly they were to be offered 'potency', a term to denote the empowerment of being positively energised into genuine assertiveness. In Transactional Analysis, these three concepts, known as The Three Ps are at the heart of TA practice. (This was consistent with the Code of Ethics, see Appendix D.)

As well as offering The Three Ps, doing the FFI questionnaire should nourish participants' psychological needs for recognition and acknowledgement, for stimulation and for structure. To do this would make it more likely that people would feel secure enough to relinquish negative

defences and open up to self-awareness, excited enough to have the energy for the concentration needed and warmed enough to engage positively in the process. In other words, the 'how' of the process of doing the FFI was held important as well as the 'what' of its contents and theoretical validity. In common with the BASIS-A Inventory (Kern, Wheeler and Curlette 1993) the FFI aims to work in an "encouraging way with individuals" (page 18), helping them to understand themselves better. Self-awareness can be increased more easily when a person does not feel a need to be defensive. Nunnally (1978, p 191) claims that administrator approach affects the behaviour of respondents in the test situation and can therefore be a source of error.

### **Design of the Questionnaire Format**

Taking the above points into account, the actual paperwork for the questionnaire was designed. Inside the simple cover page was first a page for recording personal details. Then followed one introductory page with instructions and another with examples of how to answer the questions. It was essential that the information on these pages was short and to the point, simple and clear. Their creation was a case of putting into action the principles outlined above. Pilot respondents were asked to comment in detail on these sections in their evaluations.

The next eleven pages comprised the one hundred and eight test items laid out ten to a page. This spacing made the items easy to read and the scoring of options easy to do. It was considered that making a tick right on the option words, as demonstrated in the example, would be a satisfying action, and would help to keep respondents' energy flowing right to the end. The time suggested for completion was a generous estimate. The document was finally put together in an A4-sized booklet form (Appendices C.2. & C.3.).

### **Scoring Rationale and Philosophy**

*"Although tomes have been written on the nature of measurement, in the end it boils down to something rather simple: measurement consists of rules for assigning numbers to objects to represent quantities of attributes. The term "rules" indicates that the procedures for assigning numbers must be explicitly formulated".*

(Nunnally 1978, cited in Neuman 1994 p 145)

The FFI uses a combination of ordinal scales, in which each test item is rated independently of all the others. The scoring mechanism has a clear, transparent logic which in its unfolding begins to reveal the theory it is based on, making explanations and understanding of the feedback simple, accessible and acceptable. There is an implicit assumption that human beings are never perfect, and can neither be angels nor demons!



The first part of the paper discusses the historical development of the concept of the firm, from the early theories of Adam Smith and Richard Schickel to the modern theories of Alfred Marshall and Joseph Schumpeter. It then examines the evolution of the firm as a legal entity, from the partnership to the corporation, and the role of the state in the process. The paper concludes by discussing the implications of the firm as a legal entity for the theory of the firm.

### Origin of the Corporation: Formal

The origin of the corporation is a complex issue, involving both legal and economic factors. The legal origin of the corporation is traced back to the medieval period, when the church and the state were the primary sources of law. The church viewed the corporation as a legal entity, and the state viewed it as a subject of law. The economic origin of the corporation is traced back to the early modern period, when the need for large-scale capital led to the development of the joint-stock company. The joint-stock company was a legal entity that could raise capital from a large number of investors, and it was the forerunner of the modern corporation. The paper discusses the legal and economic origins of the corporation, and the role of the state in the process.

### Formal Rationality and Philosophy

The concept of formal rationality is central to the theory of the firm. It refers to the ability of a firm to make decisions based on a set of formal rules and procedures. The paper discusses the philosophical origins of formal rationality, and its role in the development of the firm. It examines the relationship between formal rationality and the firm's legal form, and the implications of formal rationality for the theory of the firm. The paper concludes by discussing the implications of formal rationality for the future of the firm.

The numbers one to six (no zeros) were allocated to the six points of the Likert scale.

extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely
6	5	4	3	2	1

This meant that everyone would score on every item, whether it is positive or negative (Newman 1994). No answer could be right or wrong; there was no veridical comparison (Nunnally 1978).

For the Modes STRUCTURING, NURTURING, ACCOUNTING, COOPERATIVE and SPONTANEOUS, which are positive and desirable, the highest score, 6, is the best possible one for each item. For the Modes CRITICISING, MARSHMALLOWING, COMPLIANT/RESISTANT and IMMATURE, which are negative and undesirable, the lowest score, 1, is the best possible one for each item.

### **Weighting of ACCOUNTING Mode**

It was believed that ACCOUNTING Mode is an essential and central underpinning to the efficacious usage of the positive Modes. In the Functional Fluency model ACCOUNTING (reality assessment), is not divided into elements. It stands theoretically both as one of the three categories of functioning with Social Responsibility (Parent), and Self-Actualisation (Child), and also as a single behavioural Mode. One of the important aspects of a person's scores will be the balance between the Positive Parent Mode Total, ACCOUNTING Total and Positive Child Mode Total, (see the FFI Profile in Appendix C.4.), with the hypothesis that an even balance will denote good psychological adjustment. It seemed necessary and appropriate, therefore, to weight the ACCOUNTING score, otherwise there could never be an even balance. To balance out logically, the ACCOUNTING score needed to be doubled (Neuman 1994 p.150). This weighting would thus operationalise the theoretical balance between the positive aspects of the three categories of functioning.

Nunnally (1978 p 296) advises against weighting, saying that reliability is increased more effectively by adding extra test items. The problem here could be addressed by creating another twelve items to test the ACCOUNTING descriptors. This point was noted, but for the Pilot Study, it was decided to deal with the matter by simply doubling the ACCOUNTING Mode score. This kept the questionnaire from becoming even longer, and avoided the time delay inevitable in refining another twelve items. The issue will be reconsidered after the full analysis of the Pilot data.

### **Scoring mechanism**

If a person scored the full 6 for all 12 items testing a particular Mode, the mode score would be 72. If the person scored 1 for all the items, the least possible, the mode score would be 12.

The maximum score for all Modes is therefore 72, and the minimum score is 12.

In order to obtain the Functional Fluency Index as a single figure, it was decided to add the five positive Mode scores to make a total X, then add the four negative Mode scores to make a total Y and then divide X by Y to create the ratio Z, the FFI.

Maximum possible score for positive Modes is  $(72+72+72+72+144) = 432$

Minimum possible score for negative Modes is  $(12+12+12+12) = 48$

**Dividing 432 by 48 makes the highest possible FFI score to be 9.**

Minimum possible score for positive Modes is  $(12+12+12+12+24) = 72$

Maximum possible score for negative Modes is  $(72+72+72+72) = 288$ .

**Dividing 72 by 288 makes the lowest possible FFI score to be .25.**

This formulation was taken as a working structure for the Pilot Study in order to investigate the meanings and outcomes of such a calculation.

## **PILOT STUDY OF THE FUNCTIONAL FLUENCY INDEX**

Following the suggestions of Lanyon & Goodstein (1997), in their summary of general principles and practical considerations for developing a personality assessment instrument, it was decided to trial the FFI questionnaire with three hundred respondents. This would mean that there would be sufficient data to do the necessary statistical analyses for further item screening and test refinement. It also meant that norm creation for the population would be possible.

The respondents chosen were similar to those with whom the finished product would be used, namely those professionals for whom a high degree of interpersonal effectiveness was an important aspect of their expertise. A wide variety of work context profiles within this general category of human service provision was chosen. The gender balance of approximately two to one women to men, and age range 50% between 30 years and 50 years, 25% under 30 and 25% over 50, reflected the norms for these professional contexts (Nunnally 1978).

### **Organisation of the Pilot Groups**

A list of volunteer administrators was created and individual agreements were made about possible size of group, timing, how it was to be organised and the nature of the deal made with respondents about what feedback they could expect and who would do it.

The occupational profiles and sizes of the Pilot Groups are presented in the following table:

**Table 3.8. Occupational Profiles of Pilot Population**

Site	Respondents	Occupational Profile
1	7	Psychometric interpreters
2a	50	Catering students
2b	10	Further Education Lecturers
3	21	County Council Managers
4	12	Educational Psychology Trainees
5	9	Behaviour Support Teachers
6	10	Psychiatric Personnel
7	19	Police Officers in Training
8	11	Senior Teachers Pastoral & Educational Consultants
9	9	London Borough Youth Workers
10	13	Residential Care Workers with Adolescents
11	17	Inner City Teachers (Secondary)
12	10	FE Lecturers
13	8	Village Parent Group
14	8	Management Consultants
15	18	Mental Health Workers (Adults with Learning Difficulties)
16	17	University Counselling Diploma Students
17	13	Community Education Workers
18	1	Psychologist
19	15	ITA Conference Delegates (range of TA knowledge)
20	14	Mental Health Social Workers & Support Workers
21	10	Individuals on site or by post (wide range of occupational profile). (15 more were not included for SPSS, see text)
Total	302	

Arrangements varied from group to group depending on their reasons for agreeing to do the questionnaire. Some administrators (Sites 4,5,8,11,16,17 & 20) included the exercise as part of a training session or course, either as an 'add-on' element or as an integral part of the course content, in this case usually as a way of teaching aspects of TA theory. Other administrators (Sites 2,3,6,7,14) had suitable contexts and occasions with colleagues, students or trainees in which to ask them to do the exercise on a voluntary basis as a matter of mutual interest. The Site 1 group was people who work in the psychometric field, some of whom had acted as an advisory team for the test construction, and who were keen to try the test out. (Data from the actual advisory team members could not be counted as valid for the overall data collection but the evaluations from these people were of course invaluable). Site 4 Group was conducted by the researcher as part of specialist course input. Site 10 Group was done by the researcher with a TA colleague as part of group appraisal and professional development. Site 19 was done by the researcher as a TA Conference workshop in which participants completed a questionnaire; self scored it and received immediate feedback all in the one half-day session. Ongoing commentary and evaluation was given throughout. Participants were given 'Post-its' to jot evaluative comments on as they worked, and these were collected at the end.

No matter what the organisational arrangements, great emphasis was placed on regularisation of the administration procedure, so that conditions of delivery were as similar as possible (Nunnally 1978). Feedback was given in a variety of ways depending on four factors:

- Purpose of doing the questionnaire from the point of view of the respondents.
- Availability of the researcher to conduct the feedback.
- TA knowledge of the administrator.
- Time available.

Only two groups received no feedback: Site 2a where most of the students would leave before feedback was possible, and Site 6 where the deal was 'no feedback necessary'.

As well as the above groups, there was Site 21, a set of 25 individuals who completed the questionnaire and received individual feedback. These were mature and self-aware people, known to the researcher and also involved in a variety of ways in the helping or related professions. They were interested in trialling the instrument and sharing their insights during feedback into how the scores seemed accurate and relevant for them, or not, as the case might be. This gave an in-depth detailed evaluation of the instrument, invaluable for refinement ideas and also for beginning to analyse the diagnostic capabilities of the instrument. N.B. Fifteen of this group, known as the 'Individuals' Group', had also assisted in a variety of ways with the test construction, so their data was excluded from the formal analyses. Their reflections, however, were particularly relevant, well informed and useful.

In order that the Pilot Study produced data from as wide a relevant population as possible, and to avoid the Study having a limited 'in-house' profile, only a small proportion of subjects were TA practitioners or had much TA knowledge. This information was collected on the Personal Details section of the questionnaire.

### **Pilot Aims and Objectives**

The main aim of the Pilot Study was to collect data from a population large enough, consistent enough and varied enough for credible quantitative and qualitative analyses, in order to achieve the following:

- To construct a norm for the relevant population.
- To gain evidence of the validity and reliability of the instrument with respect to both theoretical constructs and instrumental effectiveness.
- To investigate the influence of different professional groupings and different personal characteristics on the data.

- To examine evaluations of the processes of administration and completion of the instrument.

A secondary aim was to complete informal trialling of feedback materials and formats, and to collate evaluations of these for use in the future development of the instrument.

In order to achieve these aims, the objectives of the Pilot Study were these:

- To administer the FFI Questionnaire to at least 300 respondents from a varied set of human service contexts.
- To collect evaluations from both the administrators and the respondents.
- To deliver results and feedback for each group as agreed in each case.
- To complete exploratory test-retest studies with six groups.
- To complete cross-data collections, where appropriate and possible, by interview (of administrators and/or actual respondents), observation and assessment of professional context.
- To conduct a full range of statistical and other quantitative and qualitative analyses, using the Statistical Package for Social Sciences (SPSS), where appropriate.

### **Evaluation of instrument design**

Evaluation forms were designed for both respondents and administrators with the aim of organising the data in such a way as to make it easy to analyse and use for improving the instrument. Both quantitative data e.g. time taken to complete the questionnaire, and qualitative data, e.g. suggestions for improvement, were solicited. A sentence completion format was used to make the process as quick and easy as possible, and to make explicit the wide range of specific comment that would be welcomed, both negative and positive. The forms were piloted with a Psychometric Advisory Group.

### **Reliability Studies**

Evidence of equivalence reliability (Newman 1994 p 128) was sought by a split-half study. The two parallel questionnaire forms A and B were to be administered in equal numbers, and data from both would be compared. This study would also give evidence of the equivalence of the two forms, and be a further aid to test refinement.

Stability reliability (Neuman 1994 p 127) was investigated by conducting a set of exploratory test-retest studies. Six groups were planned. These respondents completed the FFI twice.

- Group 1 completed both forms A and B on the same occasion, receiving feedback at a later date. (Six respondents were from Site 13 and two from Site 21).

- Groups 2 and 3 completed both forms, A and then B, with a gap of at least four weeks between the two. Only Group 2 received feedback after doing the first form. (Group 2 consisted of ten respondents from Site 3 and three from Site 21. Group 3 consisted of seven respondents from Site 20 and two from Site 21).
- Groups 4 and 5 completed the same form twice with a gap of at least four weeks between the two. Only Group 4 received feedback after doing the form the first time. (Group 4 consisted of nine respondents from Site 10. Group 5 consisted of ten respondents from Site 12).
- Group 6 completed both forms, B and then A, with a gap of at least 4 weeks between the two and feedback after the first form completion. Thus Groups 2 and 6 were the same except for the reversal of the form order.

It was intended that this process would illuminate differences between the so-called parallel forms, and also give indications of the effects of how post-test feedback, and/or a time lapse influenced the scores on the second testing. N.B. the classic test-retest study methods were not relevant here (see page 48). It was intended that the studies would yield, however, a range of relevant data. Yin (1994) refers to this type of exploratory study as one of three types of case study. It is useful, he argues, for 'getting a feel for' how to design an appropriate research exercise for the case in point.

### **Organisation and Management of the Pilot Study**

Printing of the Pilot paperwork for three hundred subjects was done on November 18<sup>th</sup> 1999. Equal numbers of Forms A and B, plus Pilot Administration Notes, Pilot Registers and Pilot Evaluation Forms (for both administrators and subjects) were printed.

Kits for each Pilot Group were made up, and a careful record kept of which group used Form A or Form B, how many subjects actually completed the questionnaire, with their code numbers along with administrative information on necessary names and addresses. A file of progress reports on all the groups was also kept, to keep track of what had been sent to whom, deadlines for returning scores and feedback materials, how many questionnaires should be returned etc. Most groups provided 100% returns. Even the one group (Site 6) which returned forms individually by post returned 10 out of the 12 sent. Only two administrators had difficulty doing the quantity they had estimated and had to return more than half their forms. In fact this meant having to organise some unexpected extra groups in April which prolonged the Pilot Study process.

## **Coding of forms**

In accordance with the ethical considerations, each form sent out was coded by site and respondent number. This would allow for recognition of all respondents anonymously. The register of codes and names was necessary primarily so that the right feedback would be given to the right respondents, but also so that the test-retest and cross-data studies could be organised. Each register was kept carefully with regard to confidentiality, and destroyed when no longer needed.

Kits were sent out with the estimated number of forms needed for the respective group with a request to administrators to respect the confidentiality of the paperwork and to return it all, used and otherwise, when complete. Stamped addressed envelopes were supplied.

There was a dilemma about whether to send out all Form A or all Form B to each group for organisational coherence, or whether to send roughly half and half A and B to some groups in order to facilitate the split half studies. In the end, because of the potential confusions with code numbers in sending the mixture of forms, groups were sent either all Form A or all Form B. There were two exceptions, where administrators had asked for about fifty forms to be done in two sub-groups. In the event this turned out to be a mistake, as they only completed about one third of all their forms, used a mixture of forms for one group and all Form A for the rest. This left an imbalance of usage and Form Bs to use up at the end. In another case where an administrator took a large number of forms to use with a fairly homogeneous set of sub-groups, a mixture of forms could have been sent, so there was a missed opportunity.

Evaluation forms had to be coded A or B by hand to match the forms completed, so that evaluations on the two forms were kept separate. This helped to organise the recording process, to keep refinement specific for each form. From this experience, it would seem that some sort of colour coding of materials belonging to each form might be of use for the final versions.

## **Pilot Feedback Processes**

A feedback structure for respondents was built into the Pilot Study for two main reasons:

1. The ethical standpoint. Subjects had put time and effort into an exercise requiring in-depth self-reflection, which aroused their curiosity and vulnerability. They deserved to know more about the instrument, how it worked and what their scores signified, if they wanted to.
2. Practicalities of development of the instrument. Feedback processes would be a crucial aspect of the use of the FFI when completed, so it was important to take this opportunity of the



Pilot Study to trial materials, methods and procedures, rather than have to do it separately at a later date.

### **Principles**

- Only what is possible to deliver should be offered, given the constraints inherent in the pilot situation.
- The pilot feedback process should be consistent in style and value system with the instrument as a whole. It should manifest the same messages as the questionnaire materials, scoring mechanism etc.

### **Scoring the FFI Pilot Study Questionnaires**

A major task, once the completed questionnaires started returning, was to do the scoring. This was a separate process from the entering of scores into the SPSS programme. The aim was to record subjects' scores in a way that they could be represented in the format of the Functional Fluency diagram, so that the meaning of the scores was illuminated by the theoretical model. This had two main purposes:

1. To render patterns of scores visible for exploration and detailed analysis, to support the instrument refinement process.
2. To provide useful material for feedback to Pilot respondents, and for development of future interpretative materials.

Scoring comprised the following stages:

- Transformation of the ticked boxes on the questionnaires into a numerical score between 1 and 6 for each question, using a coloured pen. How to do this is illustrated on page one of the Scoring Details document (Appendix C.4.).
- Transferring all numerical scores into the tables on pages two and three of the same document.
- Totalling the scores of each pair of items for all fifty-four descriptors, then totalling those six totals to obtain the Mode Totals for all nine Modes.
- Totalling the five positive and the four negative Mode scores.
- Calculating the final Functional Fluency Index score.
- Using this data to fill in the FFI Profile
- Putting the subject's code on the Profile so it could be given to the right owner!

This time consuming task had the advantage of revealing every detail of a subject's scores to the researcher, making it easy to spot points of interest, possible errors, patterns, connections and inconsistencies.

What was also needed was a computer programme which would accept the one hundred and eight scores from a questionnaire, do the calculations and then produce the results in a form similar to the Scoring Details sheets and Profile diagram. This would have the same advantage of producing effective Feedback material but with less chance of error. Not all sheets would have to be printed if they were not needed, but on the other hand multiple copies could be run off easily if that were necessary. Printouts would be in colour, looking both more attractive and more professional.

A new and unique programme was required. The researcher worked with a computer systems consultant and engineer at the university to design and create such a programme using Filemaker Pro. The process of development required constant testing and collaboration and took several months to complete. The final result, which was named the Functional Fluency Scoring Programme (FFSP), was a system for recording all scores and calculations in colour coded tables similar to those for hand scoring. This took two sheets. Another sheet gave summary balances of scores and the final Functional Fluency score. Then there was also the Profile diagram with all scores and balances displayed in colour. So there were four coloured Scoring Details sheets in the computerised version (Appendix C.5.).

Until the FFSP was ready, scoring had to continue by hand, but later Pilot groups enjoyed the computer generated Profiles for their Feedback sessions. As stated above, the sets of tables were only printed out if necessary for the more in-depth Feedback Sessions.

The last sets of Pilot data were collected by mid-July 2000. These included the extra groups run to complete the series of exploratory test-retest studies.

A comprehensive analysis of the data collected in the Pilot Study is presented in Chapter 4.

# CHAPTER 4

## DATA ANALYSIS

### INTRODUCTION

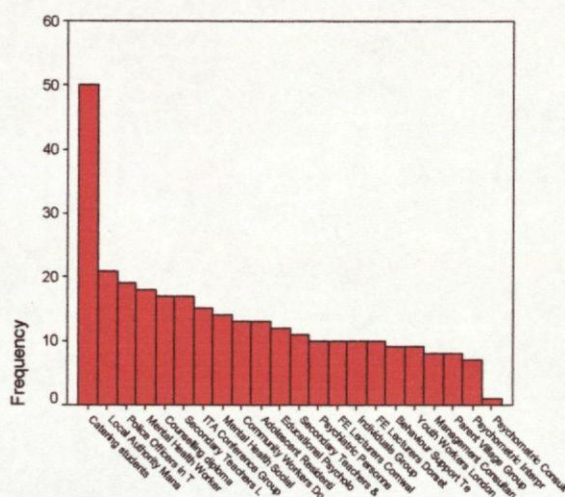
The aim of piloting the Functional Fluency Index Questionnaire with a large enough appropriate sample to provide suitable data for construction of a norm was fully achieved. The data analysis was a "systematic, in-depth inquiry" of the sort claimed by Gregory (2000 p 156) to deliver scientific answers through the diligent efforts of researchers to "distinguish the pattern into which facts (phenomena) fall and their succession, and as every science does, look for hypotheses that give coherence to the pattern (de Chardin 1970)".

Both quantitative and qualitative techniques were used. The quest was both for illumination of Transactional Analysis theory and evidence of legitimacy of the psychometric potential of the instrument. This demanded a complex but exciting exploration. Charles Desforges in a recent lecture (Desforges 2000), stated, "There is enormous synergy in working on the dimensions of both practical use and fundamental understanding" (page 13). He was referring to the phenomenon named 'Pasteur's Quadrant' (Stokes 1997) which points up the differences between research focussed solely on either fundamental understanding or the practicalities of use, and research such as Louis Pasteur's which had a dual focus, encompassing both.

### Details of the Pilot Sample

There were 302 respondents in the total Pilot sample, with 21 Pilot Groups ranging in size from 7 to 50 and one individual named as a group (See Chapter 3 p 103). In one way or another they were all human service practitioners, although there was a wide variety of professional focus.

Figure 4.1. Pilot Groups in Order of Frequency.





INTRODUCTION

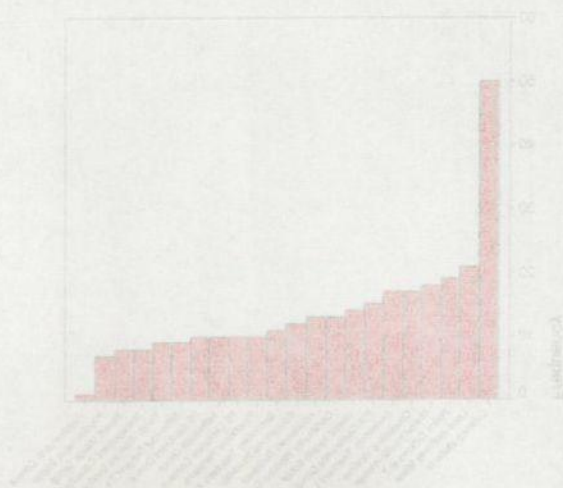
The aim of plotting the Functional Fluency Index Questionnaire with a large enough appropriate sample to provide suitable data for construction of a norm was fully achieved. The data analysis was a "systematic, in-depth inquiry" of the sort claimed by Gregory (2000 p 158) to deliver scientific answers through the diligent efforts of researchers to "distinguish the pattern into which facts (phenomena) fall and their succession, and as every science does, look for hypotheses that give coherence to the pattern" (de Charlin 1970).

Both quantitative and qualitative techniques were used. The quest was both for illumination of Transactional Analysis theory and evidence of legitimacy of the psychometric potential of the instrument. This demanded a complex but exciting exploration. Charles Desroges in a recent lecture (Desroges 2000) stated, "There is enormous synergy in working on the dimensions of both practical use and fundamental understanding" (page 13). He was referring to the phenomenon named Pastur's Quadrant (Stokes 1997) which points up the difference between research focused solely on either fundamental understanding or the practicalities of use, and research such as Louis Pastur's which had a dual focus, encompassing both.

Details of the Pilot Sample

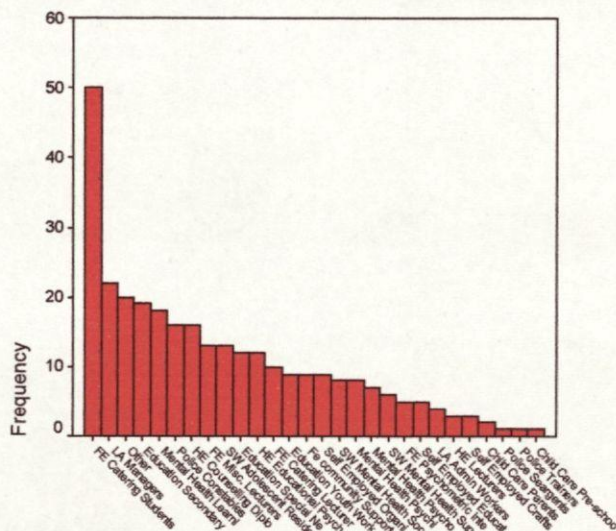
There were 302 respondents in the total Pilot sample, with 21 Pilot Groups ranging in size from 7 to 50 and one individual named as a group (See Chapter 3 p 103). In one way or another they were all human service practitioners, although there was a wide variety of professional focus.

Figure 4.1. Pilot Groups in Order of Frequency



Within these Pilot Groups were slight variations of occupation, but on the whole each Group had a coherence of professional focus. For example, the Psychometric Interpreters (N=7), included one person who did mainly administration, and one who also ran his own business, so these two individuals, as well as belonging legitimately in the group of psychometricians, also appear differently when the sample is shown according to Occupational Grouping with Context and Focus, see below

**Figure 4.2. Occupational Groups showing Context and Focus.**



The personal variables recorded on the Questionnaires gave more information about the Pilot sample as follows:

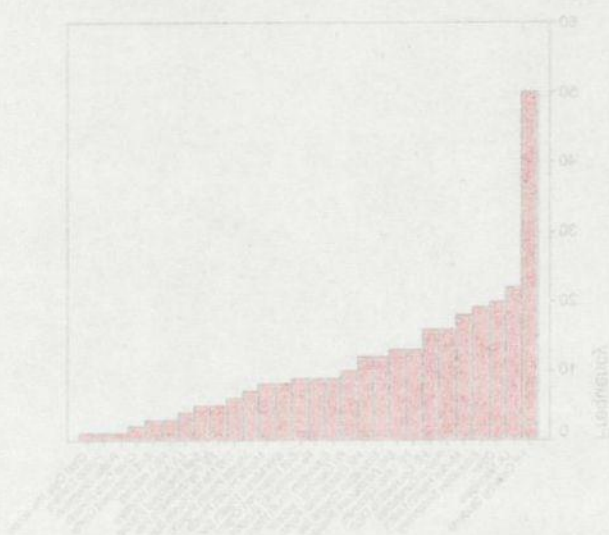
**Table 4.1. Demographic Details of Pilot Sample.**

<b>Respondents</b>		<b>N=302</b>
<b>Gender</b>		
Male		<b>116</b>
Female		<b>186</b>
<b>Age</b>		
Under 20		<b>44</b>
20-29		<b>33</b>
30-39		<b>68</b>
40-49		<b>91</b>
50-59		<b>61</b>
60 & Over		<b>5</b>
<b>Ethnic Origin</b>		
White		<b>272</b>
Preferred not to say		<b>9</b>
Other		<b>8</b>
Black Caribbean		<b>4</b>
Black Other		<b>3</b>
Nil Return		<b>3</b>
Asian Other		<b>2</b>



Within these Pilot Groups were slight variations of occupation, but on the whole each Group had a coherence of professional focus. For example, the Psychometric Interpreters (N=7), included one person who did mainly administration, and one who also ran his own business, so these two individuals, as well as belonging legitimately in the group of psychometricians, also appear differently when the sample is shown according to Occupational Grouping with Context and Focus, see below.

Figure 4.5. Occupational Groups showing Context and Focus.



The personal variables recorded on the Questionnaires gave more information about the Pilot sample as follows:

Table 4.1. Demographic Details of Pilot Sample

Respondents		N=302
<b>Gender</b>		
Male		118
Female		188
<b>Age</b>		
Under 20		44
20-29		33
30-39		68
40-49		91
50-59		81
60 & Over		8
<b>Ethnic Origin</b>		
White		272
Preferred not to say		9
Other		8
Black Caribbean		4
Black Other		3
Nil Return		3
Asian Other		2

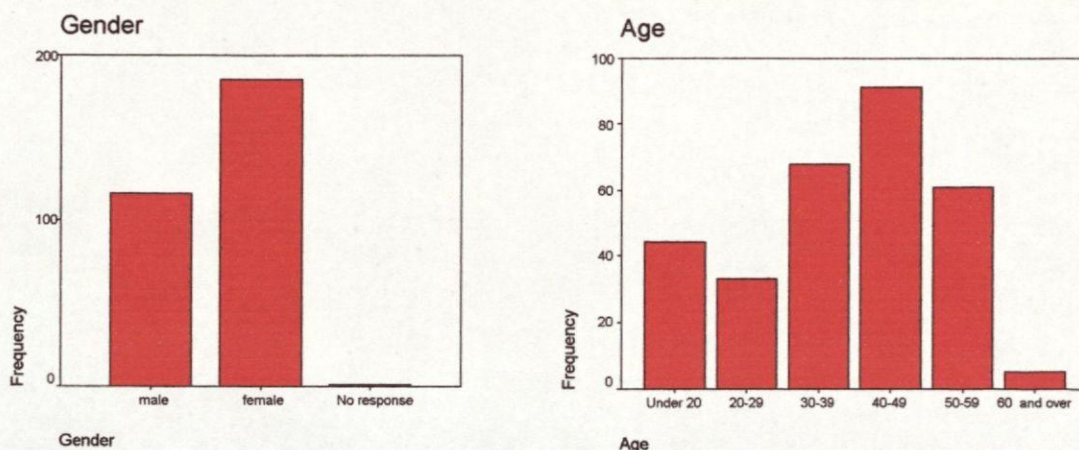


Black African	1
<b>TA Knowledge</b>	
None	128
A little (e.g. read a book)	93
Some (e.g. done Intro Course)	39
A lot (e.g. done TA Training)	36
Nil Return	6
<b>Professional Responsibility Level</b>	
Director Level (inc. self-employed)	20
Managerial Level	140
Basic Level	142

The gender and age balances reflected the norms for the overall professional context of the Pilot sample, whereas the balance of respondents' ethnic origin seemed to be overly weighted towards white. This is an interesting fact that would deserve further investigation with regard to how representative it is in such a population. Because of this extreme imbalance in the sample, it was decided to omit analysis regarding the ethnicity variable, see pages 121 & 154. The group sizes for the three levels of Professional Responsibility were as expected. A point to note, however, was that the Director Level (N=20), included those working free-lance as well as those responsible for an establishment of some sort. This, with the smaller size of the group should be taken into account when considering the statistics from this cohort.

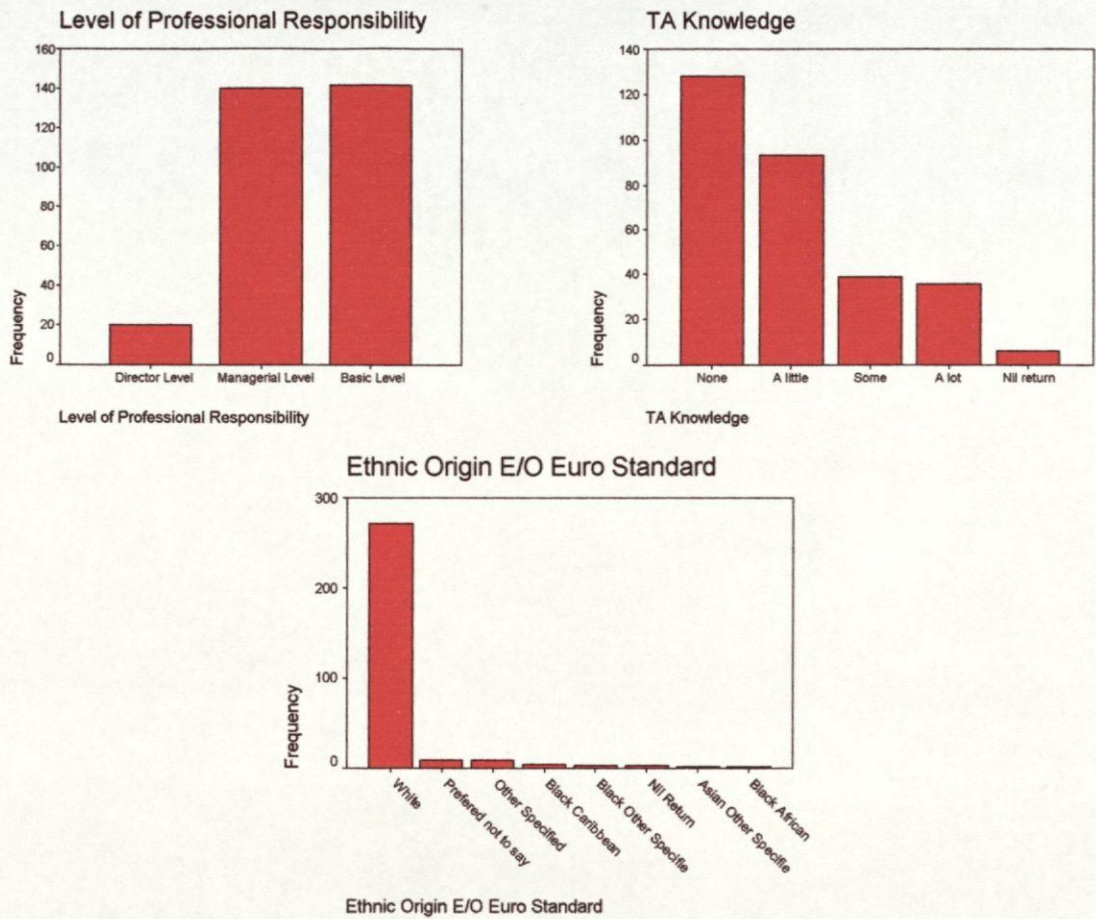
With regard to TA Knowledge, a variable specifically relevant to this study, more than two thirds of respondents either had no TA knowledge or had only read a book or heard about it. Less than one third had done any study about the approach, and less than one eighth had completed any formal training. This meant that the results were not dominated by the effect of most people being TA practitioners. These details are illustrated in the following histograms:

**Figure 4.3. Sample Details by Gender, Age, Professional Responsibility Level, TA Knowledge and Ethnic Origin.**









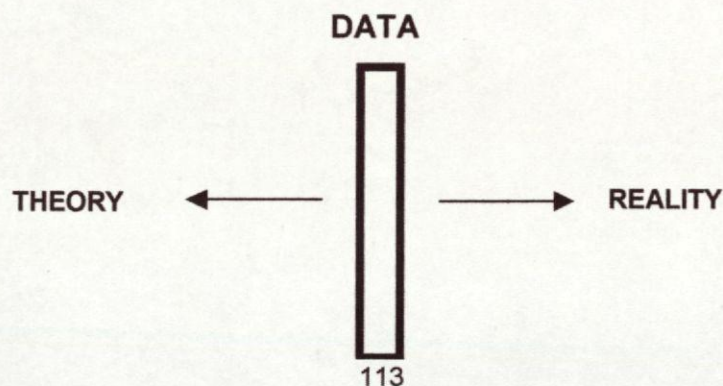
## Purposes of the Analyses

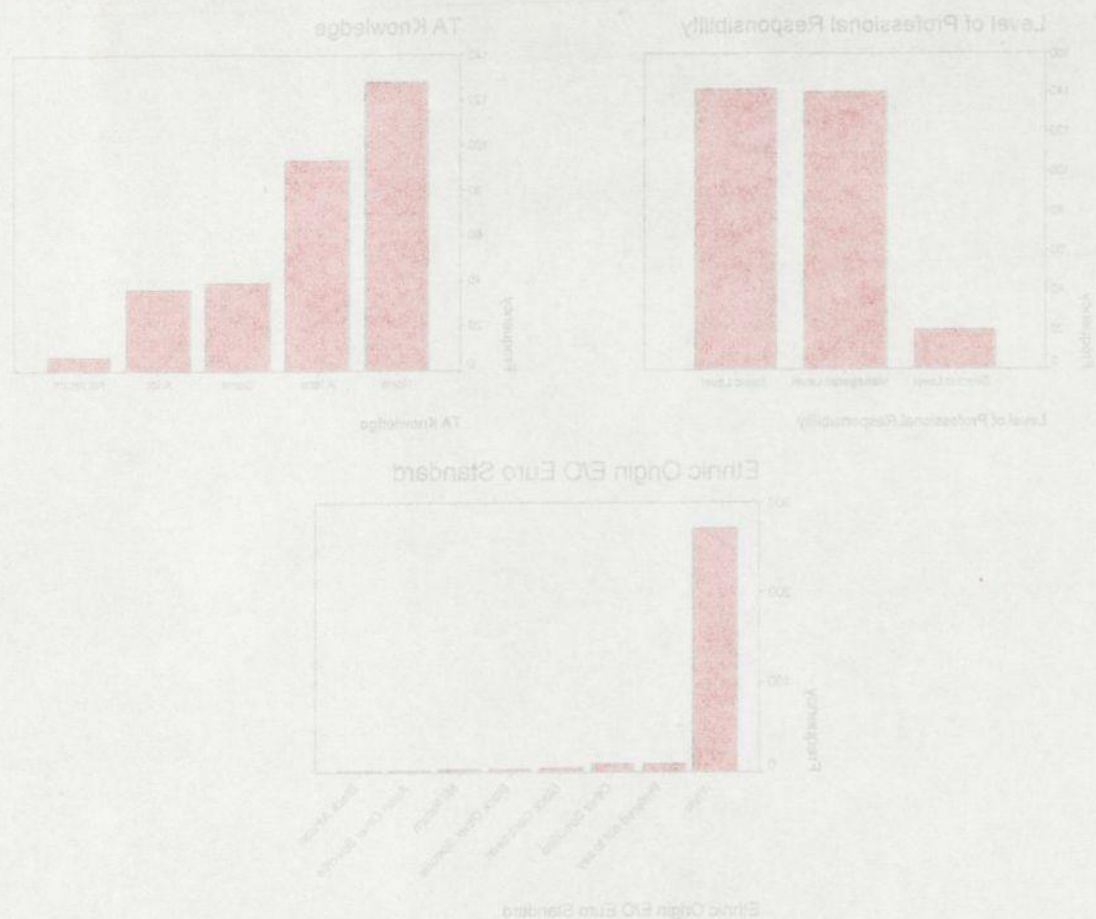
The main purpose of the range of analyses was to investigate the results in order to:

- Illuminate how the instrument operationalises the theory behind the model.
- Present evidence of how the instrument portrays respondents' characteristics.
- Examine the effectiveness of the instrument in order to identify ways to improve it.

These objectives, though closely linked, were oriented in different directions. These directions were the outcome of the two dimensions referred to in the introduction. The data provided a central source of information illuminating both the world of theoretical ideas and the world of concrete reality.

**Figure 4.4. The Dual Orientation of the Data Analysis.**





#### Purposes of the Analyses

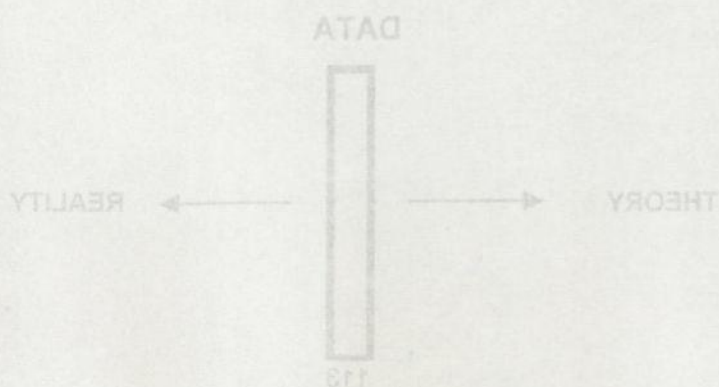
The main purpose of the range of analyses was to investigate the results in order to:

- Illustrate how the instrument operationalises the theory behind the model.
- Present evidence of how the instrument portrays respondents' characteristics.
- Examine the effectiveness of the instrument in order to identify ways to improve it.

These objectives, though closely linked, were oriented in different directions. These directions were the outcome of the two dimensions referred to in the introduction. The data provided a central source of information illuminating both the world of theoretical ideas and the world of

concrete reality.

Figure 4.4. The Dual Orientation of the Data Analysis



## CONSTRUCTION OF THE PROFILES AND THE PILOT NORM

In order to facilitate these considerations and promote coherence of the analytical inquiry, a decision was made to collate and present the test results using an adjusted version of the Profile format used in the instrument Feedback materials for respondents. This helped to make the patterns contained in the results immediately visible and comparable, and meant that a comprehensive range of statistics could be displayed simultaneously. The same format was used for both individuals' results and for Group average results. To these ends the following Group Profiles were created:

- Average Total Pilot Profile (N=302)
- Average Form A Profile (N=177) and Average Form B Profile (N=125)
- Average Pilot Group Profiles, 3 top-scoring, 3 middling-scoring and 3 bottom-scoring.
- Average Profiles for: 2 Gender Groups, 6 Age Groups, 3 Levels of Professional Responsibility Groups, the Highest Scoring Group (N=10) and the Lowest Scoring Group (N=10).

Individual respondents' Profiles were also examined and compared when relevant to explore scoring significances. The Average Total Pilot Profile is included in the next section. All the other Average Profiles are in the Appendix. (When used on the Average Profiles, for display purposes, the means of the Modes were rounded into whole numbers for ease and simplicity of quick comparison).

The summary descriptive statistics of central tendency and dispersion were used to create the Averages of the Group Profiles in order to express the sum of the scores obtained from the 302 respondents in the Pilot Study. The following data were included:

- All average Mode scores (9) and all Element scores (8) i.e. totals for Control, Care, Negative Parent, Positive Parent, Socialised Child, Natural Child, Negative Child and Positive Child.
- All Ratios (6) i.e. Pos/Neg Parent and Pos/Neg Child, Pos/Neg Control and Care and then Pos/Neg Socialised and Natural Child.
- The average Functional Fluency Index (total of positive Mode scores divided by total of negative Mode scores).
- The average Log of the Functional Fluency Index.
- The range, standard deviation and standard error as well as mean, median and modes of all the nine functional Modes.
- Maximum and minimum Mode scores.



## Rationale for the Use of the Means to Express Results and Create Norms

The choice of expression of central tendency, or average, lay between the mode, the median and the mean of each set of Mode scores. The complication of possible multiplicity of arithmetic modes needed to be avoided, along with the confusion of terminology. Because the Mode scores were integers, using the median might have lost sensitivity. The mean seemed the most suitable choice.

Another justification for this use of the mean was shown by the fact that the average FFI as calculated by the computer from the 302 individual FFIs, 2.42, was almost the same as the one calculated from the nine means of the Average Total Pilot Profile, which was 2.38. The closeness of these two ratios showed that the 'profile of the means' was close to the 'mean of the profiles'. This demonstrated the consistency of using the means in this way, and was subtle and important evidence of the reliability of the instrument and suitability of the Profile construction. In other words the Average Profile thus constructed could be said mathematically to portray a likely and feasible 'average person' from the sample. The Average Total Pilot Profile was found in fact to paint a reasonable and recognisable example of what could be expected as a representative of the Pilot sample, which validated the arithmetic method of calculating the Index. This combined evidence formed the basis of the claim that the Average Total Pilot Profile provided a set of suitable norms for the population in question.

## Average Pilot Profile Standard Error of Means

Further evidence to support this claim was provided by the levels of Standard Error of the Means for the average Mode scores. These indicated that the width of the bands within which the means of a population such as that of the Pilot Study would lie were very narrow. This statistic is important because it indicates how much confidence can be had in the accuracy of the Mode means. The results, summarised in the table below, showed that the means were well captured and did represent a notional 'whole population' such as the one tested.

Table 4.2. Standard Error of the Mode Means of the Average Pilot Profile

Standard Error of the Means of Average Pilot Profile N=302		
Mode	Mean (to 2 dp)	Standard Error
CRITICISING	37.15	0.41
MARSHMALLOWING	36.01	0.41
STRUCTURING	57.99	0.31
NURTURING	59.14	0.32
ACCOUNTING	54.51	0.34
COOPERATIVE	57.80	0.33
SPONTANEOUS	51.99	0.43
COMPLIANT/RESISTANT	36.96	0.35
IMMATURE	31.15	0.39

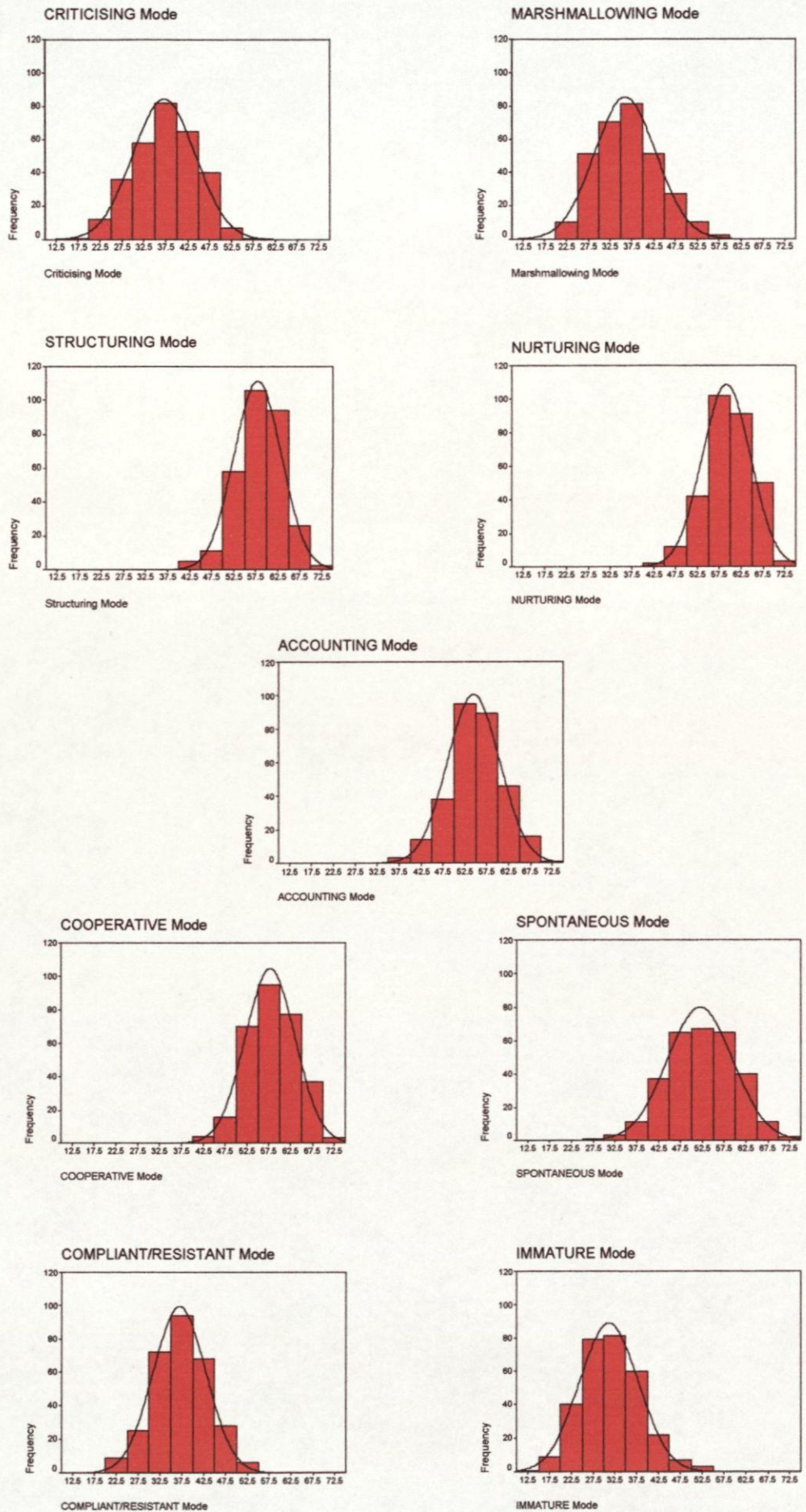
## Mode Frequencies of Total Pilot population

The charts of Mode frequencies that follow show the distributions around the mean. They indicated reasonably normal distributions, thus further endorsing the choice of the means to express results. They also demonstrated various aspects of theoretical validity of the model, for example:

- The five positive Modes are clearly differentiated from the four negative Modes by their relative positions on the x axis with positives to the right and negatives to the left.
- The positive Modes show less variability than the negative Modes, with the exception of SPONTANEOUS Mode.
- The idiosyncratic nature of SPONTANEOUS Mode stands out.
- The squatter shape of the SPONTANEOUS and IMMATURE charts shows their wider variability, demonstrating the nature of their theoretical constructs.
- The simple pairing of the Parent Modes can be seen in contrast to the complex pairings of the Child Modes, as discussed in Chapter 2.

Both quantitative and qualitative aspects of the nature of the Modes were thus depicted. These points are further elaborated in several of the analysis sections later in this chapter.

Figure 4.5. Total Pilot Mode Frequencies, Showing Distribution Round the Mean.





## Cross Correlation of all Modes Using Pearson's R

This statistical analysis was important in demonstrating further aspects of the relative independence of the nine Modes, which was in addition to the conceptual independence of the Modes demonstrated by the results of the initial Descriptor Sort exercise at the start of the project. The complete table showing full analysis details can be found in Appendix A.2. The most significant aspects of the correlational pattern are illustrated in Table 4.3. below, which is laid out in the usual Mode format of the model. N.B. the statistical significances showed up as high because of the large sample. What was of theoretical/practical significance were the actual values (relatively low though they were) of the Pearson's R coefficients, and the patterns they revealed, which also gave some further evidence of the theoretical validity of the model. For instance:

- There were no high correlations between Modes. In terms of practical significance, this gave some evidence of the relative independence of the constructs, high dependence being an extreme form of relatedness.
- The highest correlations (between 0.4 and 0.6) were found between the cluster of the five positive Modes, giving some evidence of their mutual integration.
- The highest correlation of all was between STRUCTURING and NURTURING (0.59). They are the twin aspects of 'positive parenting' (Illsley Clarke 1979, Baumrind 1991).
- The only other correlation over 0.4 was between CRITICISING and IMMATURE, suggesting that immaturity is connected with negative manifestation of authority.
- The negative correlations in particular, as can be seen from the table below, indicated key theoretical points, namely that CRITICISING contrasts with NURTURING, and IMMATURE contrasts with the positive Modes of STRUCTURING, NURTURING and ACCOUNTING.



**Table 4.3. Patterns of Inter-Mode Correlations using Pearson's R.**

<p><b>CRITICISING CORRELATIONS</b>                      0.43 with IMMATURE                      0.25 with COMPLIANT/RESISTANT                      0.25 with MARSHMALLOWING                      -0.22 with NURTURING</p>		<p><b>MARSHMALLOWING CORRELATIONS</b>                      0.37 with COMPLIANT/RESISTANT                      0.25 with CRITICISING                      0.21 with IMMATURE</p>
<p><b>STRUCTURING CORRELATIONS</b>                      0.59 with NURTURING                      0.46 with ACCOUNTING                      0.45 with COOPERATIVE                      0.44 with SPONTANEOUS                      -0.30 with IMMATURE</p>		<p><b>NURTURING CORRELATIONS</b>                      0.59 with STRUCTURING                      0.44 with COOPERATIVE                      0.38 with SPONTANEOUS                      0.32 with ACCOUNTING                      -0.39 with IMMATURE                      -0.22 with CRITICISING</p>
	<p><b>ACCOUNTING CORRELATIONS</b>                      0.46 with STRUCTURING                      0.32 with NURTURING                      0.29 with COOPERATIVE                      0.24 with SPONTANEOUS                      -0.23 with IMMATURE</p>	
<p><b>COOPERATIVE CORRELATIONS</b>                      0.45 with STRUCTURING                      0.44 with NURTURING                      0.29 with ACCOUNTING                      0.26 with SPONTANEOUS</p>		<p><b>SPONTANEOUS CORRELATIONS</b>                      0.44 with STRUCTURING                      0.38 with NURTURING                      0.26 with COOPERATIVE                      0.24 with ACCOUNTING</p>
<p><b>COMPLIANT/RESISTANT CORRELATIONS</b>                      0.37 with MARSHMALLOWING                      0.36 with IMMATURE                      0.25 with CRITICISING</p>		<p><b>IMMATURE CORRELATIONS</b>                      0.43 with CRITICISING                      0.36 with COMPLIANT/RESISTANT                      0.21 with MARSHMALLOWING                      -0.39 with NURTURING                      -0.30 with STRUCTURING                      -0.23 with ACCOUNTING</p>

It was possible to take each Mode in turn and track the pattern of correlations with the other Modes, in order to illuminate theoretical implications of the model and demonstrate its coherence and consistency. For example, MARSHMALLOWING had a small correlation with other negative Modes and almost no correlation with any positive Modes. On the other hand, IMMATURE had a small correlation with MARSHMALLOWING, a slightly larger one with COMPLIANT/RESISTANT, an even larger one with CRITICISING but negative correlations with the three positive Modes STRUCTURING, NURTURING and ACCOUNTING.

These Pearson's R results, together with those from the theoretical population described below, gave a triangulation of contrasting styles of evidence that the Pilot respondents had not answered at random.

## Comparison of the Pilot Data with That of a Theoretical Population Answering at Random

A Monte Carlo method was used to create a theoretical ('phantom') population of 10,000 cases. Computer-generated random scoring on all the 108 variables produced a theoretically random Profile of the nine Modes, the Average Phantom Profile. Using identical scoring mechanisms as in the FFI Pilot, results were produced to show the distribution of the 10,000 phantom FFIs, for comparison with the Pilot results. The figure below shows the difference in the respective means and the amount of scoring overlap.

**Figure 4.6. Comparison of Pilot Data with the Phantom Population.**



This exercise provided firm evidence that the questionnaires were producing a genuine result rather than a random one. It can be seen from the above figure that the overlap of Pilot results with the Phantom Population is very small with the FFI mean falling outside the range of the Phantom Population scores, thus indicating that the actual Pilot population was not answering randomly. A t-test for the equality of means showed that the means of the Pilot FFI and the Phantom population FFI were different at  $p < .001$ . The fact that the Pilot population's scores clustered round the mean of 2.24 rather than the 1.54 of the randomly generated Phantom Population demonstrated that the phenomenon concerned the Pilot population's characteristics and was not simply a regression effect.

### Organisation of the Evidence from the Data

The range of descriptive data on the respective Profiles gave evidence of the following matters that will be dealt with in the first five sections of this chapter. Data will be presented in a consistent pattern from the most general to the most specific. Tables will be used to show the comparative statistics relating to the scores of a) the Central Balance and b) the FFI, Parent, Child and Element ratios. Where relevant, tables of inferential statistics showing Mode means



differences will also be given. The order of the analyses is as follows:

- **The Pilot Profile Norm Features** (Page 121)  
The Pilot Profile Norm and how it portrays the likely characteristics for this type of population by showing a typical balance of Mode scores. N.B. the Average Total Pilot Profile is included.
- **The Effects of Personal Variables on Scoring Patterns** (Page 124)  
How factors such as Gender, Age, Professional Responsibility Level and Knowledge of TA affected the balances and ratios. As explained on page 112, Ethnicity is omitted.
- **Comparison of the Various Pilot Groups** (Page 140)  
How the differences between the Groups indicates theoretical and psychometric factors.
- **Comparison of the Highest and Lowest Scorers in the Pilot Population** (Page 152)  
The differences between the highest and lowest scorers as individuals, and as two groups.
- **Comparison of the Results from Forms A and B** (Page 166)  
How the Form A Average Profile compares with the Form B Average Profile.

The following sections give the results of the further range of analyses:

- **Coefficient of Variation Analysis** (Page 168)
- **Reliability Analysis using Cronbach's Alpha** (Page 172)
- **Factor Analysis** (Page 175)
- **Exploratory Test-Retest Studies Analysis** (Page 184)
- **Pilot Evaluations Analysis** (Page 186)

## THE PILOT PROFILE NORM FEATURES

The positive Modes made a higher scoring cluster and the negative Modes made a lower scoring cluster, which indicates positive functioning overall. The ratio to express this overall balance is termed the Functional Fluency Index (FFI). For the Pilot Norm this score was 2.42.

The 'Central Balance' (Total Positive Parent / ACCOUNTING / Total Positive Child) was fairly even (117 / 109 / 110) with a strong emphasis on the Parent score, which might well be expected given the professional focus of the sample. The ACCOUNTING score level indicated that Accounting was being done in a balanced relation with Social Responsibility and Self-actualisation.

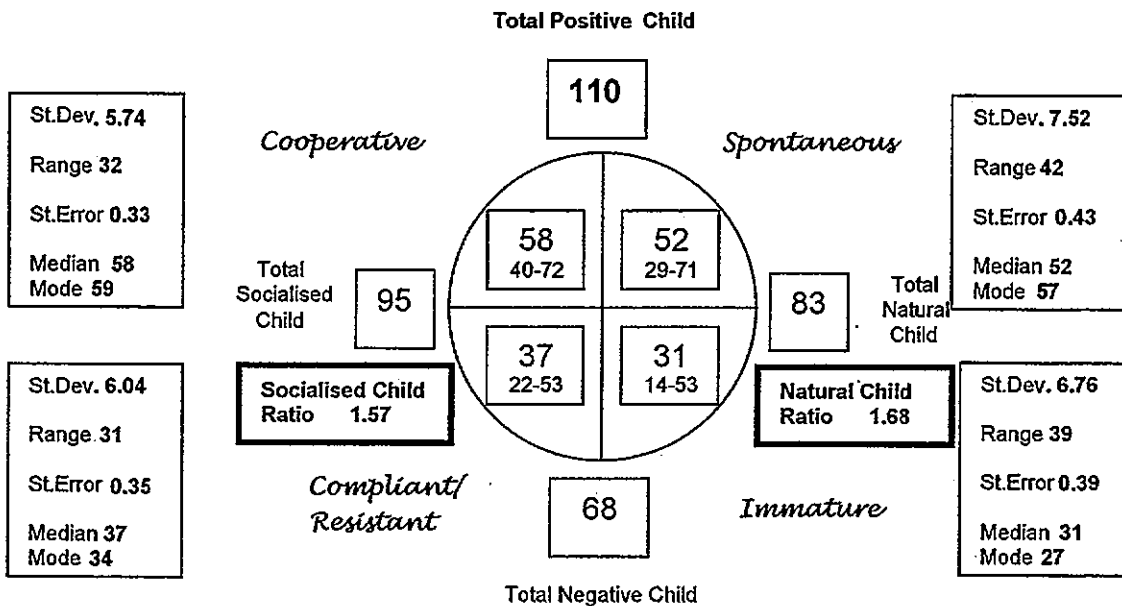
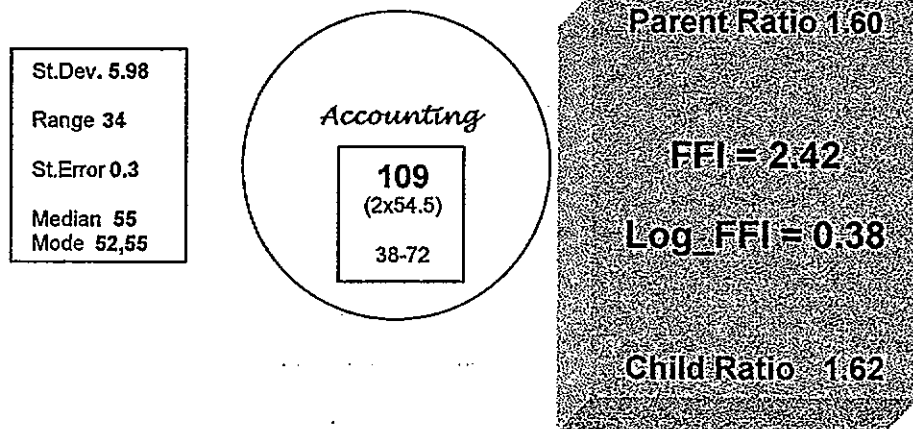
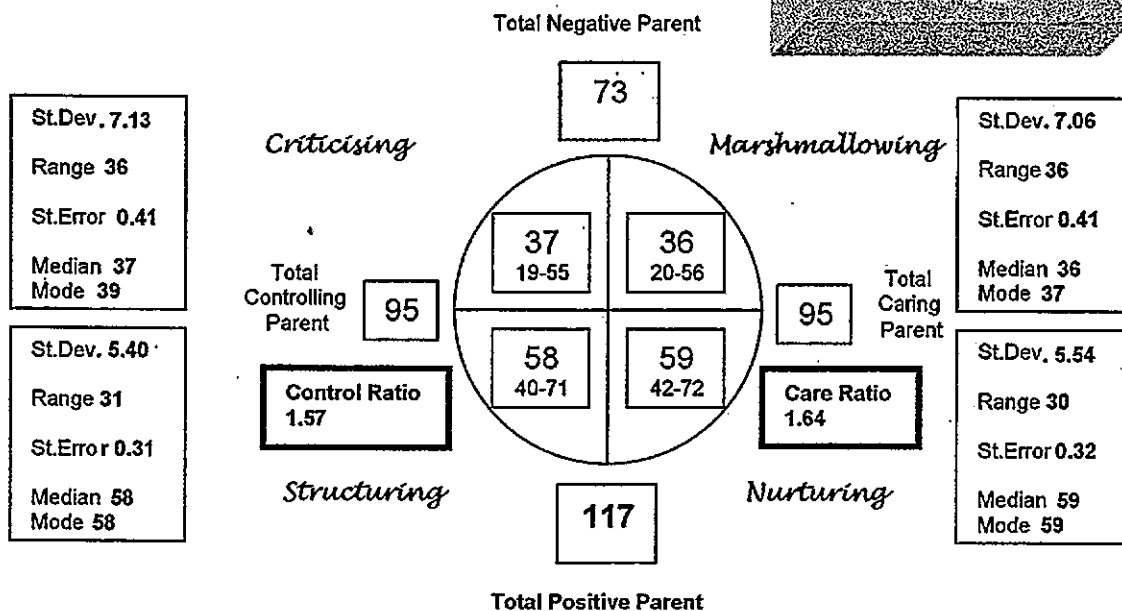
**Table 4.4. Pilot Norm Central Balance**

<b>FFI &amp; Central Balance for the Pilot Norm (N=302)</b>	
<b>Balance Scores</b>	<b>Whole sample</b>
Total Positive Parent	117
ACCOUNTING	109
Total Positive Child	110

The Average Total Pilot Profile, which follows, gives a complete summary of the data.

Figure 4.7. Average Total Pilot Profile

**TOTAL PILOT (NORM)**  
N=302





The data illustrated by tables in the text can thus be seen in relation to each other on the Profile.

The Parent and Child Ratios were evenly balanced. The Parent Ratio (Total Positive Parent over Total Negative Parent) was 1.60, showing, again as might be expected, that Parenting in this sample was more than 1½ times more positive than negative. The Child Ratio (Total Positive Child over Total Negative Child) was almost the same, 1.62, showing a positive personal psychological adjustment. Parental Control and Care Ratios were also balanced, 1.57 and 1.64, with Care being slightly more positively emphasised than Control. This reflected the balance of professional focus of the Pilot Groups. Many more of them were involved in care than in public order, see page 103. Socialised and Natural Child Ratios were similarly balanced, 1.57 and 1.68 respectively. At a simple level these indicated a positive socialisation and a high degree of personal individuation. Further theoretical discussion follows in Chapter 5. The table below gives a summary of these scores.

**Table 4.5. Pilot Norm FFI & Ratio Scores**

<b>Pilot Norm FFI &amp; Ratio Scores</b>	
<b>Ratios</b>	<b>Pilot Norm (N=302)</b>
FFI	2.42
Parent Ratio	1.60
Child Ratio	1.62
Parental Control Ratio	1.57
Parental Care Ratio	1.64
Socialised Child Ratio	1.57
Natural Child Ratio	1.68

The next table summarises the Pilot Norm Mode means with the scores rounded into whole numbers. These reveal the basis for the ratios as above, and show how the pairs of Modes were balanced. These can be seen clearly on the Profile. Of particular note are:

- The two negative Parent Modes.
- The two positive Parent Modes.
- The cluster of the five positive Modes overall.
- The two negative Child Modes.

The evidence indicated a well-balanced 'average person', very positively socially responsible, realistic and psychologically well adjusted. This description derived from theoretical interpretation coincides with a hypothetical notion of an ideal worker in the helping professions (Walker 2001).

**Table 4.6. Pilot Norm Mode Means**

<b>Pilot Norm Mode Means</b>	
<b>MODE</b>	<b>Means</b>
CRITICISING	37
MARSHMALLOWING	36
STRUCTURING	58
NURTURING	59
ACCOUNTING	55
COOPERATIVE	58
SPONTANEOUS	52
COMPLIANT/RESISTANT	37
IMMATURE	31

The anomaly of the lower scores for both aspects of Natural Child, see also Chapter 5, may indicate particular characteristics of the Pilot population in general, for instance:

- a) This population has a lesser requirement professionally for individualistic creativity 'doing your own thing in your own way' and therefore either attracts people who are less SPONTANEOUS or who have had it trained out of them.
- b) This population has grown out of the childish aspects in IMMATURE and become particularly 'grown-up' without much emphasis on individual creativity. Again this may have happened before or after opting into the helping professions, or be a combination of inclination and reinforcement of both training and the job requirements (Walker 2001).

The Pilot Norm therefore provided a suitable profile with which to compare the range of further results. The analyses of the sub-groups of the pilot population presented in the following sections threw more light on these matters from both the theoretical and social reality perspectives previously outlined. See page 111 for the order of these analyses.

## **THE EFFECTS OF PERSONAL VARIABLES ON SCORING PATTERNS**

The data on the four main sample characteristics will be presented in turn, following the same order as above, to show if and how the factors affect scoring and how they compare with the Norm. Comparison Plots and tables for each cohort display a range of descriptive and comparative statistics to illustrate key aspects of the data. Further statistical details can be found on the Average Group Profiles in Appendix B.

## Gender Differences

In the sample there were 116 males and 185 females. On the whole gender only affected the scores slightly. However, there was a generalised bias which is expressed in the FFI and the other ratios. This bias caused the female scores to be slightly more positive overall. The more specific differences are outlined below.

The overall pattern was the same for both cohorts in terms of positive and negative Mode scores. The FFI score for females came out just higher, 2.49, than the Norm, 2.42, and for males it was just lower, 2.32. The difference was significant at  $p < .001$ , that is, very highly statistically significant.

Total Positive Parent and Total Positive Child scores were higher for females, while ACCOUNTING was lower, whereas for males that pattern was reversed, so the males had a very slightly more even Central Balance. The meanings and implications psychologically of different patterns of Central Balance were not yet clear, although it seemed as though they indicated aspects of psychological adjustment. In particular the relative level of ACCOUNTING within the Balance seemed to indicate how realistically someone was in touch with current reality, as discussed in Chapter 5.

**Table 4.7. Comparison of Central Balances by Gender**

<b>FFI &amp; Central Balances for Females and Males</b>		
<b>Balance Scores</b>	<b>Females</b>	<b>Males</b>
Total Positive Parent	119	114
ACCOUNTING	108	110
Total Positive Child	111	107

All the ratio scores, Parent, Child, Control, Care, Natural and Socialised Child were higher for the female group. They were also slightly higher than the Norm, except for Socialised Child, which was the same.

**Table 4.8. Comparison of FFI and Ratio Scores by Gender**

<b>FFI and Ratio Scores by Gender</b>			
<b>Ratios</b>	<b>Female N=185</b>	<b>Male N=116</b>	<b>Pilot Norm N=302</b>
<b>FFI</b>	<b>2.49</b>	<b>2.32</b>	<b>2.42</b>
<b>Parent Ratio</b>	<b>1.65</b>	<b>1.52</b>	<b>1.60</b>
<b>Child Ratio</b>	<b>1.65</b>	<b>1.53</b>	<b>1.62</b>
<b>Parental Control Ratio</b>	<b>1.61</b>	<b>1.49</b>	<b>1.57</b>
<b>Parental Care Ratio</b>	<b>1.69</b>	<b>1.55</b>	<b>1.64</b>
<b>Socialised Child Ratio</b>	<b>1.57</b>	<b>1.54</b>	<b>1.57</b>
<b>Natural Child Ratio</b>	<b>1.77</b>	<b>1.51</b>	<b>1.68</b>



The following table shows the statistical significance levels for the differences between the Mode means, using Analysis of Variance (ANOVA).

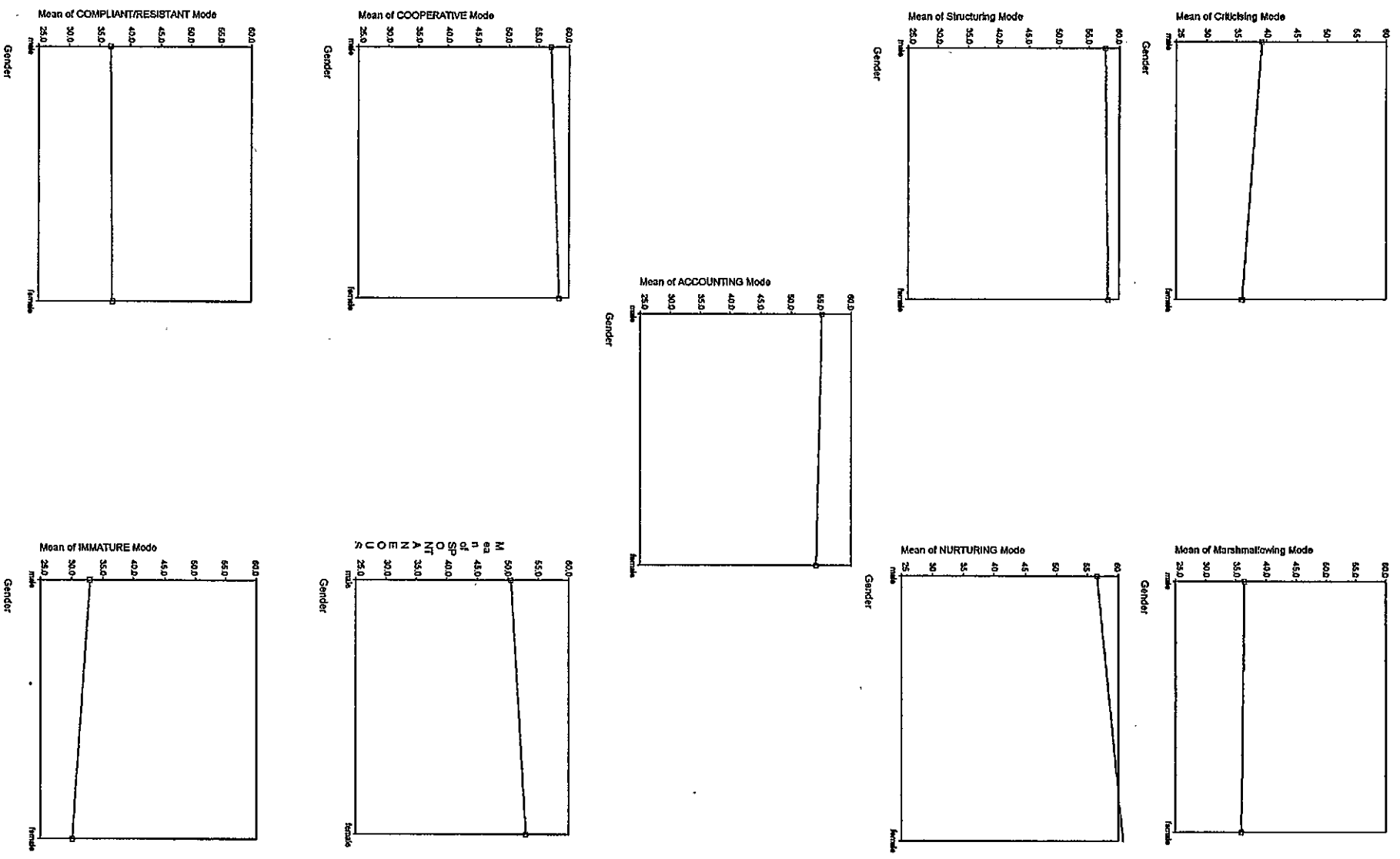
**Table 4.9. ANOVA Comparison of Male and Female Groups**

<b>Statistical Significance Levels of Differences between Male &amp; Female Mode Means</b>				
MODE		Female Means	Male Means	Significance Level (p)
CRITICISING	-	35.86	39.18	<.001 males higher
MARSHMALLOWING	-	35.86	36.34	.571
STRUCTURING	+	58.14	57.71	.503
NURTURING	+	60.81	56.48	<.001 females higher
ACCOUNTING	+	54.16	55.10	.184
COOPERATIVE	+	58.40	56.95	.031 females higher
SPONTANEOUS	+	52.91	50.53	.006 females higher
COMPLIANT/RESISTANT	-	37.09	36.74	.630
IMMATURE	-	30.04	32.93	<.001 males higher
<b>Functional Fluency Index</b>		<b>2.49</b>	<b>2.32</b>	<b>&lt;.001 females higher</b>

It could be seen that the males scored higher on negative Modes and the females on positive Modes. This was the reason that the balances and ratios came out more positive for the females. In terms of both gender stereotype and social reality, these data made sense and caused no surprises. Men in British culture seem inclined on the whole to take a more dominating approach in terms of control, and women, again on the whole, to put a greater emphasis on looking after people in a responsive way. There is more permission for women to give greater rein to creative pursuits than for men, hence their higher SPONTANEOUS scores, and women also often appear to be more 'grown-up' and personally responsible than men, hence their lower IMMATURE scores (Spender 1982).

The scoring patterns in this case reflected both the theoretical assumptions and commonly experienced social reality. These data therefore provided an aspect of endorsement of the reliability of the instrument in terms of its accuracy of measurement. The Gender Comparison Plots that follow show the differences in average Mode scores for the men and women in the Pilot sample.

Figure 4.8. Gender Comparison Plots





## Age Differences

The sample was divided into six age groups: Under 20 (N=44), 20-29 (N=33), 30-39 (N=68), 40-49 (N=91), 50-59 (N=61), Over 60 (N=5). The last, very small and diverse, group produced greatly differing Mode ranges and standard deviations, thus causing high standard errors of the mean. There could be little confidence in generalising in any way from the results of this Over 60 age group. However, in spite of this, and of the fact that there happened to be some idiosyncratic characters in the group, their Average Profile is consistent with what one would expect from this whole Pilot sample, and is not far off the Norm.

The overall pattern for all the age groups was again the same in terms of positive and negative Mode scores. However, age clearly influenced many aspects of the scoring. Most significantly, the data showed that the positive Mode scores rise with age and the negative Mode scores fall, so that the Functional Fluency Index was also seen to rise with age. The Central Balance fluctuated slightly with age, the most even balances being for the youngest and the oldest groups. The next table illustrates this matter.

**Table 4.10. Comparison of Central Balances by Age**

FFI & Central Balances for all the Age Groups						
Scores	Under 20	20-29	30-39	40-49	50-59	60 & Over
Total Positive Parent	114	118	116	120	118	115
ACCOUNTING	110	106	107	110	110	112
Total Positive Child	108	110	109	112	110	111

The very high Parent score for the 40-49 age group possibly indicates the amount of emphasis they put into their professional role at this stage in life compared with the other two aspects of the Balance.

Not just the FFI but all the ratio scores became gradually more positive with age, with minor variations in the general trends. These trends can be tracked on the table below.

**Table 4.11. Comparison of FFI and Ratio Scores by Age**

FFI and Ratio Scores by Age							
Age Group Size	Under 20 N=44	20-29 N=33	30-39 N=68	40-49 N=91	50-59 N=61	Over 60 N=5	Pilot Norm N=302
<b>FFI</b>	<b>2.17</b>	<b>2.37</b>	<b>2.39</b>	<b>2.46</b>	<b>2.60</b>	<b>2.74</b>	<b>2.42</b>
Parent Ratio	1.37	1.62	1.61	1.64	1.71	1.83	1.60
Child Ratio	1.48	1.53	1.60	1.65	1.75	1.71	1.62
Parental Control Ratio	1.36	1.57	1.57	1.59	1.66	1.79	1.57
Parental Care Ratio	1.39	1.67	1.66	1.69	1.76	1.87	1.64
Socialised Child Ratio	1.50	1.49	1.56	1.57	1.66	1.57	1.57
Natural Child Ratio	1.45	1.58	1.66	1.74	1.86	1.89	1.68

The Under 20 group were all students in various aspects of the catering and hospitality industry. It can be seen that there is a larger jump in scores between this group and the next one, maybe because of immaturity and also perhaps because of lack of life experience and adult interpersonal skills. The Over 60s group, see the notes above, contained at least one exceptionally high scorer, so these scores are somewhat inflated, and perhaps unrealistic. The 50-59 year-old group seems to demonstrate a very high degree of overall positive scoring, the most consistently Functionally Fluent group. This would also make sense in the same terms as for the youngest group, namely maturity, life experience and 'people-skills' acquired by that stage of life. The following table shows the statistical significance levels for the differences between the Mode means.

**Table 4.12. ANOVA Comparison of Age Groups**

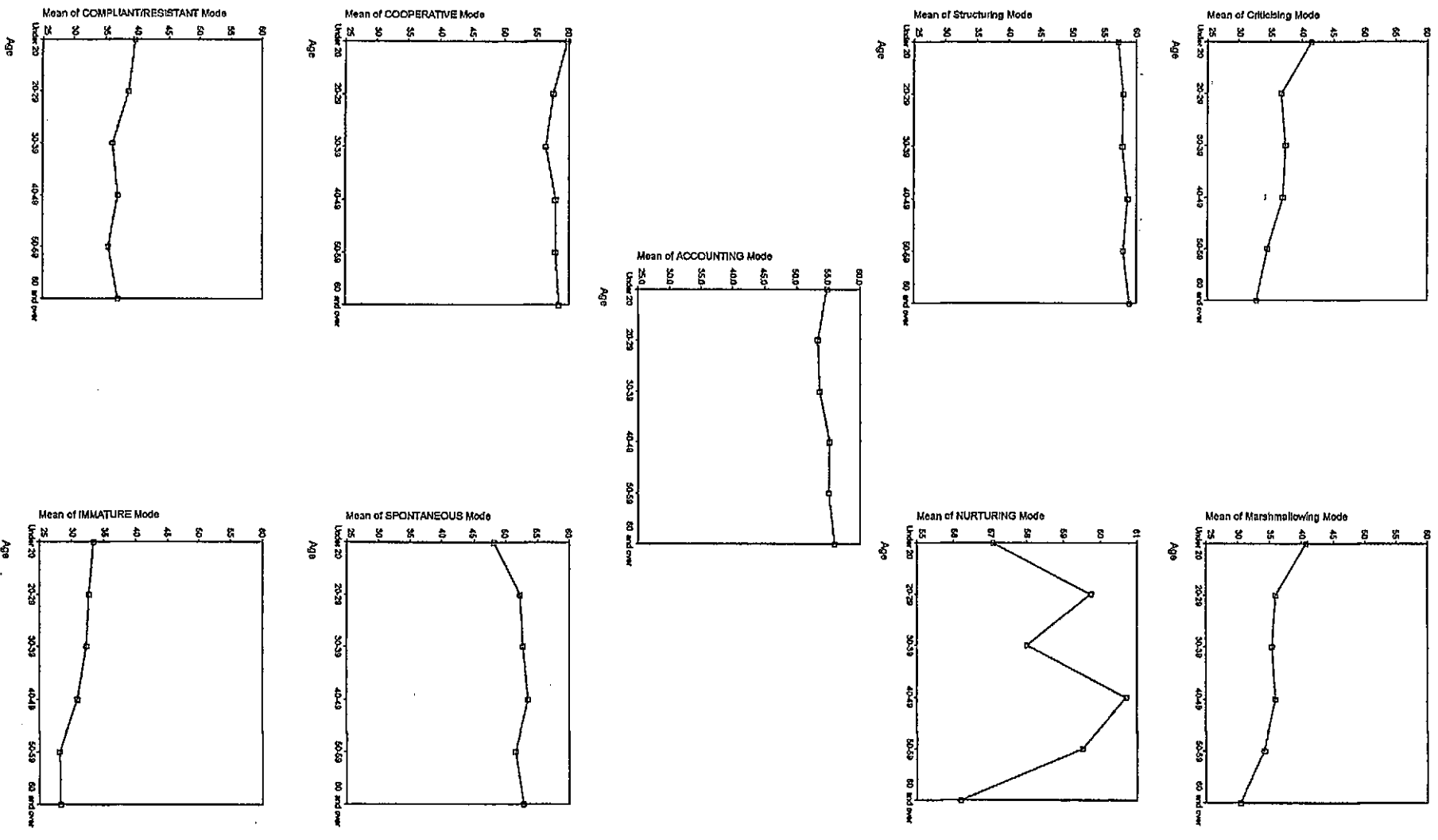
Comparison of Significance of Difference between Mode Means by Age								
MODE		Under 20	20-29	30-39	40-49	50-59	60 & over	Significance (p)
CRITICISING	-	41.50	36.73	37.44	36.98	34.51	32.80	<.001
MARSHMALLOWING	-	40.66	35.85	35.26	35.95	34.11	30.40	<.001
STRUCTURING	+	57.11	57.88	57.79	58.58	57.93	58.80	.783
NURTURING	+	57.07	59.73	58.00	60.70	59.51	56.20	.002
ACCOUNTING	+	54.77	53.24	53.68	55.09	54.97	56.00	.496
COOPERATIVE	+	59.77	57.52	56.38	57.95	57.87	58.40	.088
SPONTANEOUS	+	48.16	52.18	52.68	53.54	51.52	52.80	.006
COMPLIANT/ RESISTANT	-	39.57	38.55	36.06	36.88	35.36	36.80	.005
IMMATURE	-	33.34	32.61	32.28	30.92	28.10	28.40	.001
<b>Functional Fluency Index</b>		<b>2.17</b>	<b>2.37</b>	<b>2.39</b>	<b>2.46</b>	<b>2.60</b>	<b>2.74</b>	<b>&lt;.001</b>

The four negative Modes show more difference, which is explained by the way in which respondents scored steadily less on them according to increased age. This may be due to a normal process of healthy integration and decontamination. In this population there might be a contributing effect from professional development and training. The picture for the five positive Modes as a cluster is less consistent. There is no evidence that the Modes ACCOUNTING or STRUCTURING are affected by age, and the effect for COOPERATIVE is only slight. NURTURING shows more difference, but the difference fluctuates with a high for the 40-49 group. Perhaps this is a peak time of life for nurturing, with both children and parents needing care. SPONTANEOUS also shows significant difference between the groups. This is largely accounted

for by the low score of the Under 20 group. It links with their high IMMATURE score in that developmentally they probably still have to achieve a fully mature adult identity. Maslow (1970) suggested that individuals of student age might not have had enough experience with life to be fully 'self-actualised' or 'individuated'. It was further noted that this youngest Group also scored highest on COOPERATIVE, which may, as suggested by Williams & Williams (1980 p 127), denote the pressure to conform of their developmental age group, see also page 152. Older age groups have reversed the pattern of these two Modes, see the table above.

In order to examine the patterns of scoring of the different age groups according to the Mode means, a set of means plots follows presented according to the model layout. This demonstrates that the trends towards positive increase of ratio scores were not consistent Mode by Mode. These theoretical considerations are discussed further in Chapter 5. The Age Comparison Plots offer a visual impression of the trends and patterns in these data.

Figure 4.9. Age Comparison Plots



## Levels of Professional Responsibility Differences

The Pilot sample was divided into three groups in terms of Level of Professional Responsibility. The Basic Level (N=142) included people in jobs that carried little or no responsibility for the management of others' work as well as their own. The Managerial Level (N=140) included all those who carried managerial responsibilities. The Director Level (N=20) included the self-employed, some of them in consultancy roles, as well as those in charge of a whole department or business. This much smaller group, with idiosyncratic features, was inclined to include those in older age groups, so it was expected that rise in age would link with rise of level of professional responsibility.

The overall pattern was once again consistent with the Norm, and in the same way as with the Age differences, positive Mode scores rose with increased Level of Responsibility, and negative Modes fell. Score ratios therefore increased in the same way, with the FFI rising steadily to above the norm, so that the difference here was significant at  $p = .007$ . The Central Balances showed a tendency to become more even, with the Total Positive Parent remaining emphasised as in the Norm, see the table below. The only upset in the pattern was the drop in Director Level ACCOUNTING. The social reality that might be relevant to this result was that the Director Level group did include some people who were somewhat erratic and unrealistic in their attitudes to organisation as evidenced by behaviours connected with the test-taking situation. This might even say something about why they chose to work independently, see further comments about the Mode scores.

**Table 4.13. Comparison of Central Balances by Level of Professional Responsibility**

Central Balances for the Levels of Professional Responsibility Groups			
Scores	Basic Level	Manager Level	Director Level
Total Positive Parent	117	117	118
ACCOUNTING	109	110	105
Total Positive Child	109	109	114

It can be seen that although the Central Balance figures remain somewhat similar for the Director Level group, their FFI is considerably higher. This means that their negative scores must have been reduced in order to produce the high positive ratio. The other ratio scores followed the same pattern and are displayed in the next table.



**Table 4.14. Comparison of FFI and Ratio Scores by Level of Professional Responsibility**

<b>FFI &amp; Ratio Scores by Level of Professional Responsibility</b>				
<b>Ratios</b>	<b>Basic N=142</b>	<b>Manager N=140</b>	<b>Director N=20</b>	<b>Pilot Norm N=302</b>
<b>FFI</b>	<b>2.35</b>	<b>2.48</b>	<b>2.56</b>	<b>2.42</b>
Parent Ratio	1.54	1.65	1.71	1.60
Child Ratio	1.56	1.63	1.75	1.62
Parental Control Ratio	1.53	1.59	1.64	1.57
Parental Care Ratio	1.56	1.71	1.83	1.64
Socialised Child Ratio	1.50	1.61	1.76	1.57
Natural Child Ratio	1.65	1.68	1.76	1.68

All the scores rise with increased levels of responsibility. A point of interest here is that the Control ratios do not rise as significantly as the Care ratios, see the comment below on the STRUCTURING scores. The next table and set of plots give more detail about the Mode scores to show how this is so. Although these data demonstrate the differences between the three groups and the pattern trends, which mirror those of the age groups as expected, the differences in the Mode scores were not on the whole statistically significant, except for negative Parent Modes and Socialised Child Modes.

**Table 4.15. ANOVA Comparison of Levels of Professional Responsibility Groups**

<b>Comparison of Significance of Difference between Mode Means by Level of Professional Responsibility</b>						
<b>MODE</b>		<b>Basic N=142</b>	<b>Manager N=140</b>	<b>Director N=20</b>	<b>Significance (p)</b>	<b>NORM N=302</b>
CRITICISING	-	38.18	36.34	35.50	.054	37.15
MARSHMALLOWING	-	37.67	34.79	32.70	<.001	36.01
STRUCTURING	+	58.27	57.64	58.35	.590	57.99
NURTURING	+	58.69	59.49	59.95	.386	59.14
ACCOUNTING	+	54.58	54.74	52.45	.274	54.51
COOPERATIVE	+	56.86	58.43	60.15	.012	57.80
SPONTANEOUS	+	52.15	51.49	54.45	.244	51.99
COMPLIANT/ RESISTANT	-	38.01	36.30	34.10	.005	36.96
IMMATURE	-	31.68	30.64	31.00	.438	31.15
Functional Fluency Index		2.35	2.48	2.56	.007	2.42

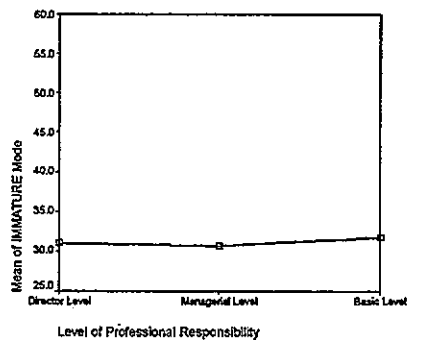
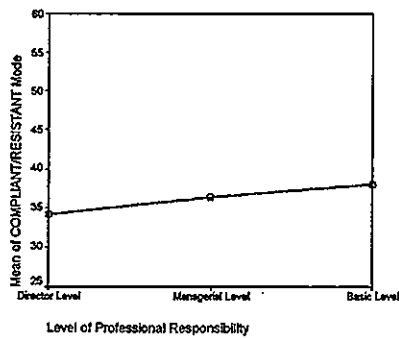
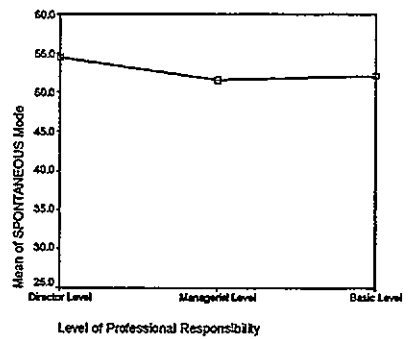
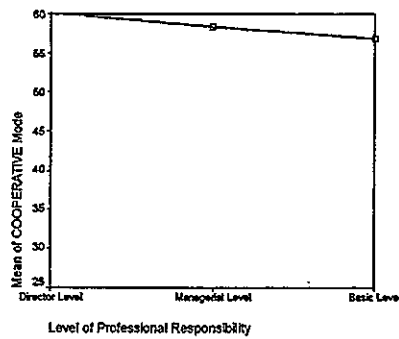
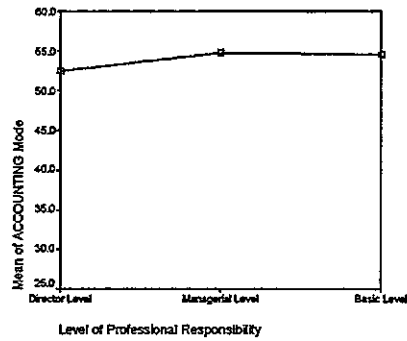
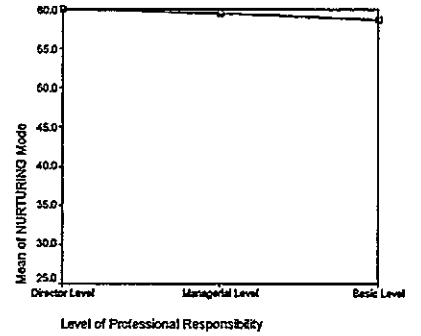
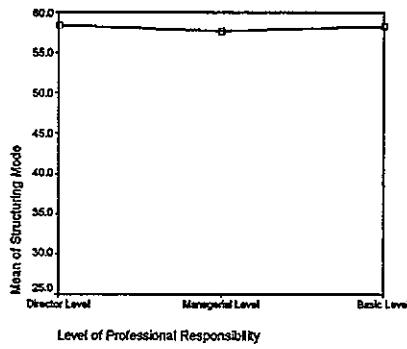
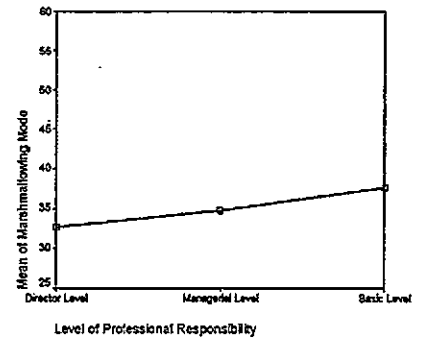
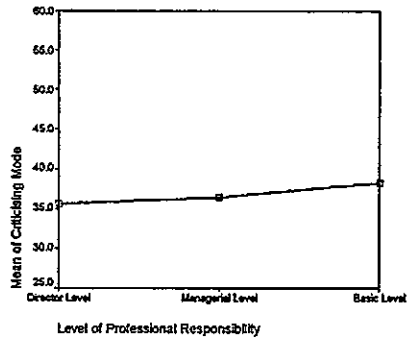
This table shows how the negative Parent Modes, CRITICISING and MARSHMALLOWING, reduced steadily with increased professional responsibility level. The differences were significant at  $p=.054$  and  $p<.001$  respectively. This would be in line with increased professional effectiveness. STRUCTURING scores, however, stayed much the same, showing little significant difference. This was potentially another sign of the cultural lack of recognition of this Mode in terms of leadership

and execution of authority as discussed in Chapter 3. NURTURING increased only slightly, maybe because of the professional demand for a high focus on nurturing at all levels. COOPERATIVE increased steadily with increased professional responsibility level. The difference was significant at  $p=.012$ , possibly denoting increase in general social skill. ACCOUNTING and SPONTANEOUS showed interesting variations, although the differences were hardly significant. The fact that ACCOUNTING dipped at the highest level while SPONTANEOUS rose, may indicate the rather wayward but creative nature of some of the members of the director group, mentioned above, who were good at doing their own thing in their own way. In terms of professional responsibility, the reality may be that at Basic Level there is freedom to do your own thing without responsibility for others. At Managerial Level, this freedom is actually diminished, while at Director Level there is a new freedom with the power of veto and decision-making. This would account for SPONTANEOUS Mode dipping and rising.

The negative Socialised Child Mode, COMPLIANT/RESISTANT, which may correlate with a propensity to have 'hang-ups', reduced considerably with increase of professional responsibility level, showing increase in psychological adjustment, which may be somewhat comforting. The difference was significant at  $p=.005$  and is what might be expected and hoped with increased professional competence. On the other hand, IMMATURE scores showed almost no difference, so either this Mode was unaffected by the factor of level of professional responsibility, or immaturity was not a strong feature of this sample and remained low for all levels. It is interesting to note that the means for IMMATURE of all three levels of professional responsibility were close to the norm of 31.15.

These patterns of scoring according to the Mode means are depicted on the following set of means plots.

Figure 4.10. Levels of Professional Responsibility Comparison Plots



11.

12.

13.

14.

15.

16.

17.

18.

19.

20.

21.

22.

23.

24.

25.

26.

27.

28.

## Knowledge of TA Differences

The sample was divided into four groups according to their knowledge of TA. Respondents had to decide, with the guidance as shown here, whether their knowledge was 'None' (N=128), 'A little' e.g. read a book (N=93), 'Some' e.g. done a course (N=39) or 'A Lot' e.g. in TA training (N=36). Scoring seemed to be affected very little by respondents' knowledge of TA. The possibility that respondents' subjective judgement on this matter was erratic and/or faulty must be taken into account in assessing how much this factor was relevant to the scoring profiles.

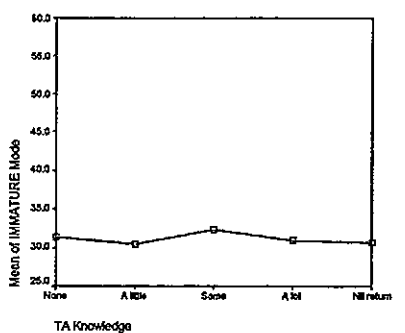
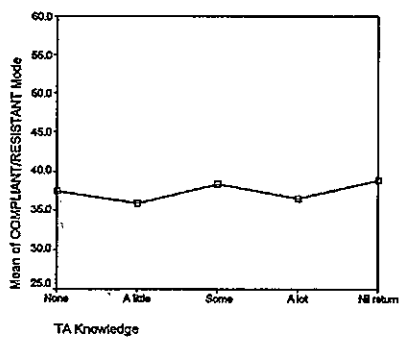
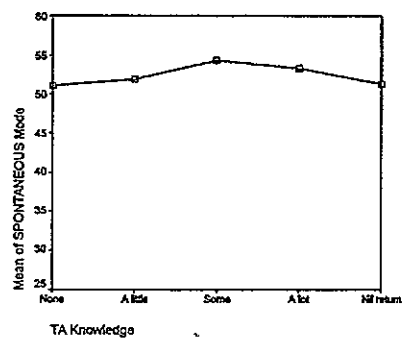
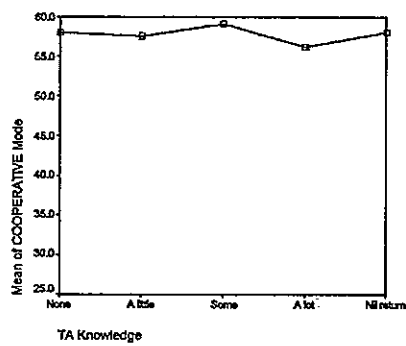
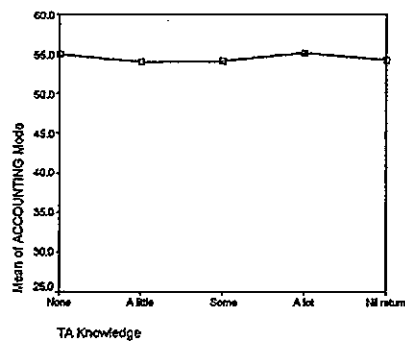
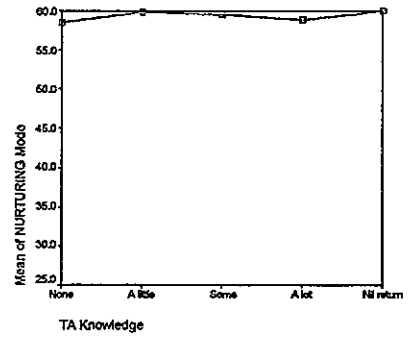
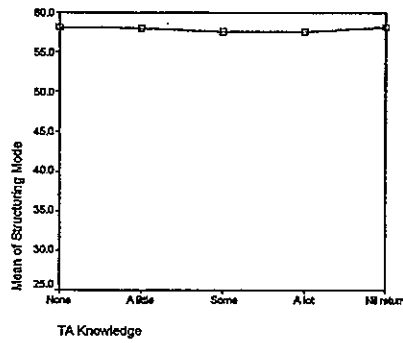
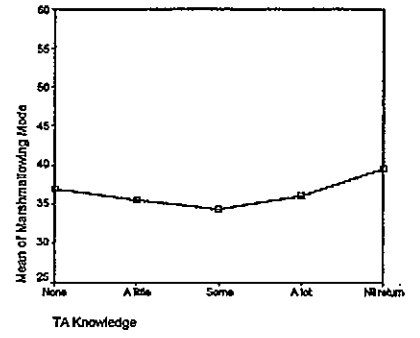
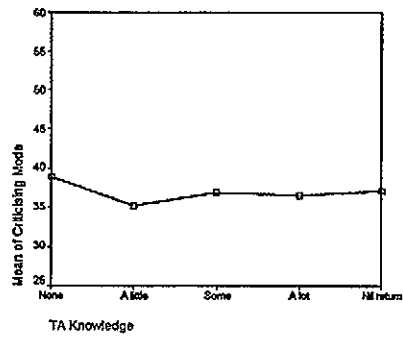
The pattern and levels of scores came out very close to the Norm. The following table sets out the details of the Mode means for all four groups in comparison with the Norm.

**Table 4.16. ANOVA Comparison of TA Knowledge Groups**

FFI & Mode Means by TA Knowledge Groups						
MODES	NONE	A LITTLE	SOME	A LOT	NORM	Significance (p)
CRITICISING	38.80	35.24	36.87	36.50	<b>37.15</b>	<b>.007</b>
MARSHMALLOWING	36.77	35.47	34.28	35.97	<b>36.01</b>	.213
STRUCTURING	58.18	58.04	57.54	57.61	<b>57.99</b>	.961
NURTURING	58.49	59.94	59.56	58.81	<b>59.14</b>	.384
ACCOUNTING	54.91	53.94	54.08	55.11	<b>54.51</b>	.733
COOPERATIVE	58.02	57.57	59.13	56.17	<b>57.80</b>	.254
SPONTANEOUS	51.05	51.87	54.31	53.25	<b>51.99</b>	.149
COMPLIANT/ RESISTANT	37.35	35.89	38.33	36.53	<b>36.96</b>	.183
IMMATURE	31.40	30.42	32.36	30.94	<b>31.15</b>	.635
Functional Fluency Index	<b>2.37</b>	<b>2.49</b>	<b>2.43</b>	<b>2.45</b>	<b>2.42</b>	.284

The variations did not show definite trends and differences except in the means for the Mode CRITICISING, for which the difference was significant at  $p=.007$ . One might wonder why this particular Mode is the only one to show significant difference, especially when that difference comes between those with no TA knowledge and the rest. Might there be any possibility that the first thing people learn from TA is how not to operate from CRITICISING Mode? The following set of means plots illustrates both this point and the lack of distinct patterns in these data.

Figure 4.11. TA Knowledge Comparison Plots



[The body of the page contains extremely faint and illegible text, likely bleed-through from the reverse side of the document. No specific content can be transcribed.]

Differences found, according to TA Knowledge, were mostly between 'None' and the rest of the groups, though even this was not for all Modes. This may or may not be meaningful. There was an echo of this phenomenon in the comparative ranges of scores for each Mode, however. In all but NURTURING the 'None' group had a wider range of scores for each Mode; this was repeated for the range of FFI scores. There is therefore a small possibility that having even a little TA knowledge caused respondents to answer in a more conforming way, even if it did not influence the scoring level. There was little consistency of trend to indicate that increasing TA knowledge was connected with similarly increasing conformity of response, see the following table.

**Table 4.17. Ranges of Scores for Each Mode by TA Knowledge**

<b>Ranges of Scores for Each Mode &amp; FFI by TA Knowledge</b>					
<b>MODE</b>	<b>NONE</b>	<b>A LITTLE</b>	<b>SOME</b>	<b>A LOT</b>	<b>NORM</b>
CRITICISING	36	31	28	32	36
MARSHMALLOWING	34	32	28	27	36
STRUCTURING	31	25	21	24	31
NURTURING	28	30	19	24	30
ACCOUNTING	33	29	29	21	34
COOPERATIVE	30	30	19	26	32
SPONTANEOUS	40	37	36	23	42
COMPLIANT/ RESISTANT	29	26	26	24	31
IMMATURE	37	33	25	26	39
<b>FFI Range</b>	<b>2.32</b>	<b>1.69</b>	<b>1.58</b>	<b>1.85</b>	<b>2.32</b>

### **Conclusion to Section on Personal Variables**

In conclusion, it is clear that for this population of people working in the helping professions, none of the personal factors of gender, age, level of professional responsibility or TA knowledge was correlated with a change in overall profile pattern. The positive Mode cluster was higher than the negative Mode cluster in every case. What did change, albeit subtly, were the balances of individual Mode scores, which affected all the ratio scores.

The Modes were affected in different ways by the four factors, but there seemed to be no clear pattern of correlation, see the following table:



**Table 4.18. The Effect of the Four Factors on the Mode Means**

Effect of the Four Factors on the Mode Means				
MODE	Gender	Age	Level of Professional Responsibility	TA Knowledge
CRITICISING	**	**	*	**
MARSHMALLOWING		**	**	
STRUCTURING				
NURTURING	**	**		
ACCOUNTING				
COOPERATIVE	*	*	**	
SPONTANEOUS	**	**		
COMPLIANT/ RESISTANT		**	**	
IMMATURE	**	**		
FFI	**	**	**	

Key: \*\* = significance at  $p < .01$       \* = significance at  $p < .05$

CRITICISING was affected by all four factors, though only slightly by level of professional responsibility. MARSHMALLOWING, however, was only affected by age and level of professional responsibility. STRUCTURING seemed not to be significantly affected by any of the factors, which was surprising, whereas NURTURING was affected by age and gender. As mentioned above, this may have something to do with cultural patterns. ACCOUNTING also showed no significant difference for any factor, giving some evidence for the possibility that, as a Mode, it is more of an internal process than the other Modes. COOPERATIVE and SPONTANEOUS were both affected by age and gender, though COOPERATIVE less so, whereas only COOPERATIVE was affected by level of professional responsibility. This makes some logical sense in terms of a connection between professional demands and socialisation. COMPLIANT/RESISTANT, as one would hope (see above), was affected by age and level of professional responsibility but not by gender, whereas IMMATURE was affected by gender and age, but not by level of professional responsibility. IMMATURE scores were lower for women and declined with age, but maybe the respondents in this sample were all fairly mature even at the start of their careers, as pointed out before in the discussion about the sample norm.

These results seem to follow a logical rationale based on theoretical assumptions of TA, and they also illustrate aspects of human individuation and socialisation in a way that matches on the whole with both stereotype and social reality. Further theoretical discussion follows in Chapter 5.

## COMPARISON OF THE VARIOUS PILOT GROUPS

The Pilot Groups, as outlined in the introductory section, represented a wide range of professional activity within the broad focus of human service provision, sometimes referred to as 'the helping professions'. The Average Profile for each group was drawn up and considerable differences were noted. The Analysis of Variance (ANOVA) comparison performed using the Statistical Package for Social Sciences (SPSS) confirmed this observation. Coherence of the instrument was thus demonstrated, whether the data were combined into the Average Total Pilot Profile (Standard Error of the Mean), see page 122, or separated out into the Pilot Groups (ANOVA). It can be seen that the chance that the results were random was less than two in a thousand for all the Modes except STRUCTURING (six in a thousand) and NURTURING (three in a hundred).

**Table 4.19 ANOVA Comparison of All Pilot Groups**

Statistical Significance of the Differences between the Pilot Groups' Mode Means		
Mode	Overall Mean (Pilot Norm)	Statistical Significance (p)
CRITICISING	37.15	p<.001
MARSHMALLOWING	36.01	p<.001
STRUCTURING	57.99	.006
NURTURING *	59.14	.031
ACCOUNTING	54.51	.002
COOPERATIVE	57.80	.002
COMPLIANT/RESISTANT	36.96	p<.001
SPONTANEOUS	51.99	p<.001
IMMATURE	31.15	.001
FFI	2.42	p<.001

\*The result for NURTURING is noteworthy. NURTURING was a key Mode for this population of human service practitioners, so it was logical for there to be less variability overall, which may explain the difference for this Mode. Either the respondents were in general natural nurturers, or they had been trained to nurture professionally. As STRUCTURING is the other component of Positive Parenting but perhaps less of a crucial ingredient for some of the Groups, the same hypothesis is relevant and is borne out by the pattern of relative significance of NURTURING and STRUCTURING seen in the table above.

The table showing the full data of all groups' Mode means is in Appendix A.1. The following set of means plots shows the range of scores for the Modes organised in the pattern of the model.

## COMPARISON OF THE VARIOUS PILOT GROUPS

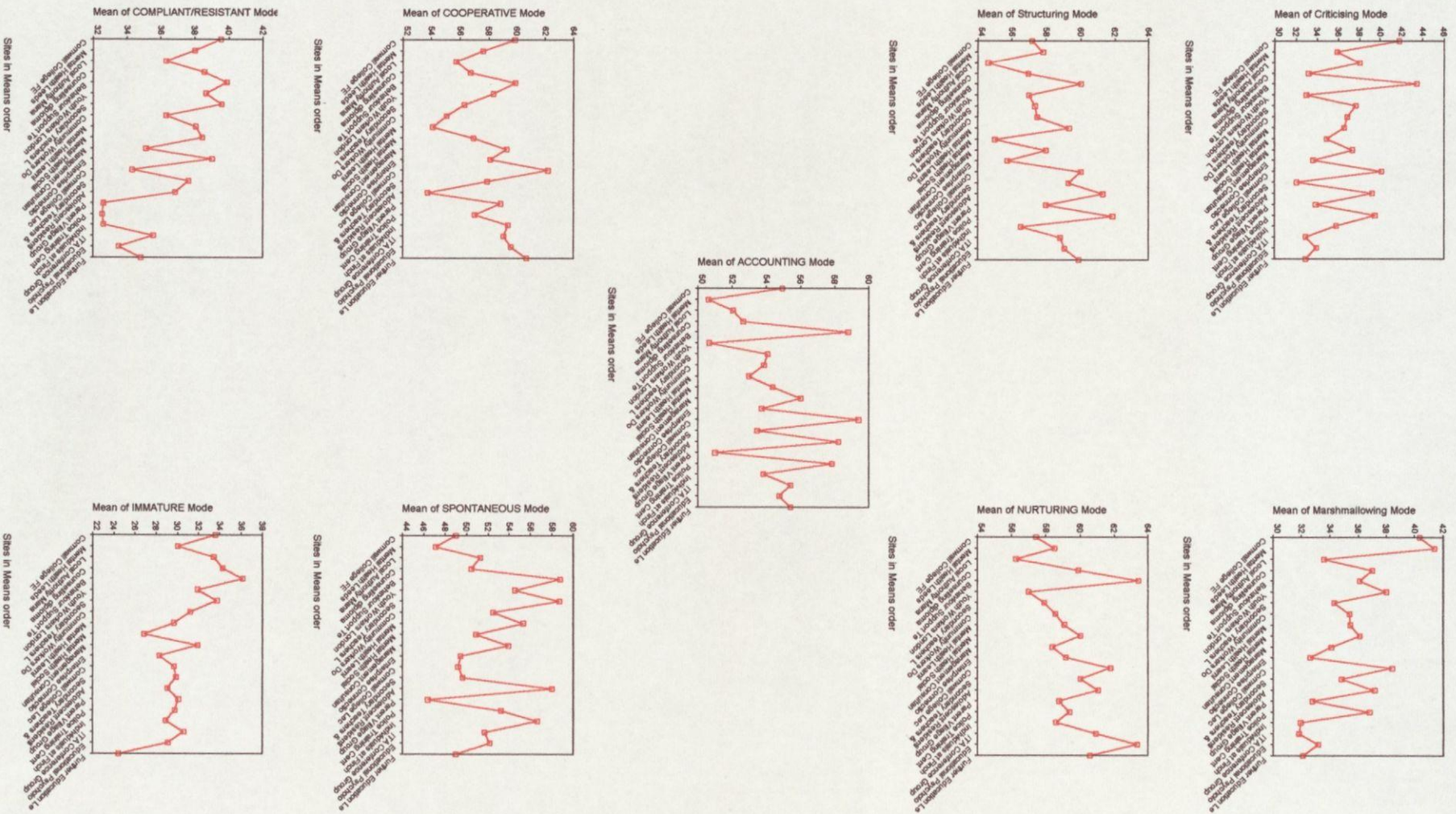
The first part of the report deals with the comparison of the various pilot groups. The groups are divided into three main categories: the first group, the second group, and the third group. Each group is described in detail, including the number of pilots, the type of aircraft, and the duration of the flight. The results of the flights are compared, and the differences between the groups are discussed. The report concludes that the first group performed the best, followed by the second group, and then the third group.

TABLE I  
Summary of Pilot Group Performance

Pilot Group	Number of Pilots	Aircraft Type	Flight Duration (hrs)	Altitude (ft)	Speed (mph)	Fuel Consumption (gals)
Group 1	10	Boeing Stearman	2.5	10,000	150	100
Group 2	15	Cessna 441	3.0	8,000	120	150
Group 3	20	Yakovlev Yak-52	4.0	12,000	180	200

The second part of the report discusses the results of the flights. The data from the flights are analyzed, and the differences between the groups are discussed. The report concludes that the first group performed the best, followed by the second group, and then the third group. The reasons for these differences are discussed, and suggestions are made for improving the performance of the other groups. The report also includes a list of references and a bibliography.

Figure 4.12. Pilot Groups Comparison Plots





In order to make the Pilot Group comparison task manageable, the groups were arranged in rank order of their Average FFI score, and a selection was made for detailed analysis according to the following criteria:

- Include groups with a range of scores, three high, three middle and three low.
- Choose cohesive groups, not those that were ad hoc collections of individuals.
- Represent a variety of professional contexts.
- Represent a variety of social, cultural and geographic locations.

This meant that the three groups from the low end of the range were in fact the lowest scoring groups:

Site 3 Local Authority Managers (N=21) county in the Southwest.

Site 6 Psychiatric Personnel (N=10) northern city.

Site 2 Catering Students (N=50) county in the far Southwest.

Those from the high end of the range included the highest two and the fifth highest:

Site 12 Further Education Lecturers (N=10) southern county.

Site 4 Educational Psychology Trainees (N=12) rural university.

Site 7 Police Officers in training (N=18) rural city.

Those from the middle were a scattered selection from the thirteen groups placed centrally:

Site 1 Psychometric Interpreters (N=7) southern county town.

Site 15 Mental Health Workers (N=18) West Midlands.

Site 5 Behaviour Support Teachers (N=9) northeast London.

### **Purpose of the Detailed Analysis**

In addition to the overall purposes of the data analysis (see page 113) this analysis of the selection of Pilot groups had two particular foci:

1. To investigate the characteristics of groups that scored higher or lower.
2. To seek a theoretical rationale for the nature of the higher or lower scores.

The differences were illustrated by levels of scoring, patterns of scoring and particular features of the scoring. As before, the results were displayed on Average Group Profiles (see Appendices B.13. - B.21.) and the investigation used the same framework order as before:

- Overall pattern of Profile
- Central Balance
- FFI and Ratio scores
- Mode scores.

Trends and patterns for the ratio and Mode scores were noted. Particular attention was paid to exceptions in order to assess how they might illuminate theory and/or instrument effectiveness.

### Overall patterns and Central Balance

Firstly it could be seen that the overall profile patterns for all the groups maintained the positive bias as would be expected from these populations. The Central Balances were as follows:

**Table 4.20. Comparison of Central Balances by Selection of 9 Pilot Groups**

FFI & Central Balances for the 9 Pilot Groups										
	HIGHEST			MIDDLE			LOWEST			
	Site 12	Site 4	Site 7	Site 1	Site 15	Site 5	Site 3	Site 6	Site 2	
<b>CENTRAL BALANCE</b>	FE Lecturers Dorset	Educational Psychology Trainees	Police Officers in Training	Psychometric Interpreters	Mental Health Workers	Behaviour support Teachers	Local Authority Managers	Psychiatric Personnel	Catering Students	<b>NORM</b>
<b>Total Positive Parent</b>	121	122	121	115	118	123	111	117	114	<b>117</b>
<b>ACCOUNTING</b>	110	110	116	108	106	118	104	102	110	<b>110</b>
<b>Total Positive Child</b>	110	112	110	107	109	119	107	105	109	<b>110</b>

It can be seen from this table that the Total Positive Parent (TPP) scores are much higher for those groups involved in education and the police and thus carrying a professional role of social responsibility, Sites 12, 4, 7 and 5. This fact skews the Central Balance even more than for the Pilot Norm. Conversely, the Local Authority Managers show a lower TPP Score that would fit with the less parentally responsible nature of their work. Similarly the students, Site 2, were not yet in professionally responsible roles.

It is also clear from this table that 'even balance' does not necessarily correlate highly with a high FFI. The results from these groups threw more light on the actual meaning of this feature of the scoring and are discussed further in Chapter 5. In fact the most 'balanced', i.e. even, scores here were from the Behaviour Support Teachers, Site 5. If an 'even balance' were found to be connected with a characteristic such as 'down-to-earth level-headedness', then it would fit for this group, according to their administrator, regardless of other aspects of their scoring.

### FFI and Ratio Scores

The ratio scores, because they eliminated the factor of exuberant/restrained scoring styles, see Chapter 5, showed group differences more precisely.

**Table 4.21. Comparison of FFI and Ratio Scores by Selection of 9 Pilot Groups**

FFI & Ratio Scores for the Selection of 9 Pilot groups										
	HIGHEST			MIDDLE			LOWEST			NORM
	Site 12	Site 4	Site 7	Site 1	Site 15	Site 5	Site 3	Site 6	Site 2	
RATIOS	FE Lectures	Educational Psychology Trainees	Police Officers in Training	Psychometric Interpreters	Mental Health Workers	Behaviour support Teachers	Local Authority Managers	Psychiatric Personnel	Catering Students	
Parent	1.86	1.82	1.59	1.72	1.64	1.56	1.54	1.52	1.39	1.60
Child	1.86	1.78	1.75	1.60	1.60	1.57	1.55	1.54	1.47	1.62
Parental Control	1.82	1.74	1.59	1.65	1.59	1.40	1.45	1.61	1.36	1.57
Parental Care	1.91	1.91	1.59	1.79	1.69	1.75	1.65	1.44	1.43	1.64
Socialised Child	1.74	1.76	1.73	1.49	1.42	1.50	1.56	1.53	1.50	1.57
Natural Child	2.04	1.79	1.77	1.75	1.83	1.64	1.55	1.57	1.44	1.68
FFI	2.79	2.66	2.57	2.50	2.40	2.34	2.30	2.25	2.18	2.42

The groups' ratios can be compared with the Pilot Norm as well as with each other. The trends were very clear. They followed the FFI levels. Exceptions were therefore significant. For instance:

- a) Ratios for the Police Officers were out of line in the three Parent ratios, which were surprisingly low in relation to other scores. This was because this group scored highly on the negative Parent Modes as well as the positive ones. Their Control Total was also somewhat higher than their Care Total (see their Average Profile in Appendix B.15.). This pattern might well fit with a policing stereotype.
- b) Both the Psychometric Interpreters and the Mental Health Workers had an imbalance on their Socialised Child and Natural Child Ratios in which the former was surprisingly low and the latter surprisingly high. These two groups had something in common professionally in that they worked individually on their cases, not as a team combination or within an institution, so their style could develop uniquely. This shows a fit with the social reality, which can be explained theoretically, see Chapter 5.
- c) The Behaviour Support Teachers whose Central Balance was so even, had some ratios, however, which matched their FFI score, i.e. below the Norm, and which illuminated it further. Their Control ratio was low in comparison with their Care ratio in spite of the fact that their Total Control score was higher than their Total Care score, i.e. they did more Controlling but did it less well. This might have had some connection with why they had opted out of the classroom into more individual work with children. More can be said about this case at the Mode level, see below.



- d) There was a similar Control/Care ratio imbalance for the Psychiatric Personnel, but reversed. Quantitatively they did more Caring than Controlling, but the Control quality was higher than that of the Care.

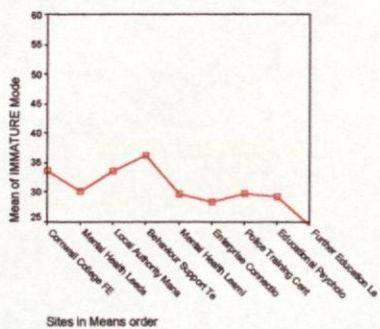
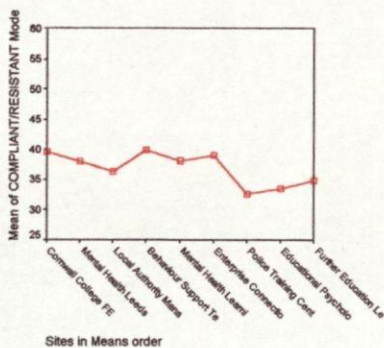
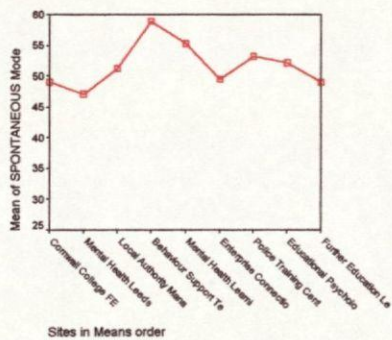
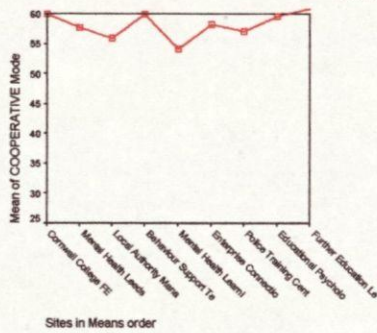
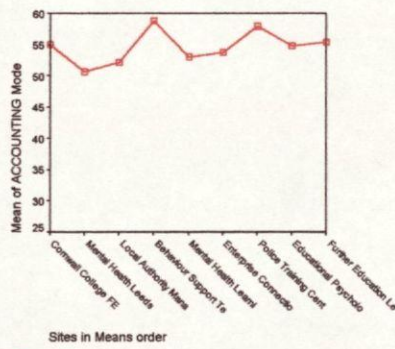
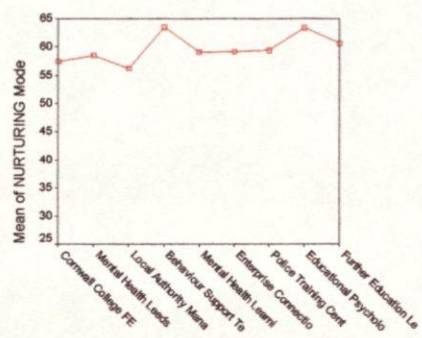
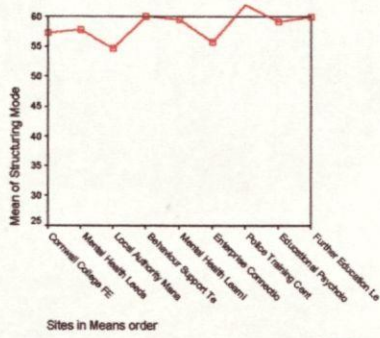
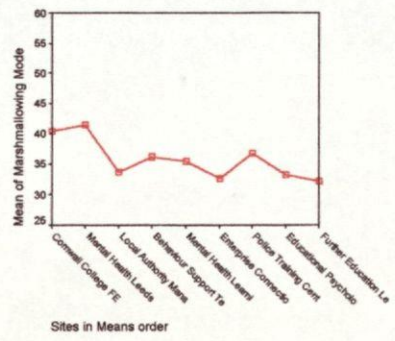
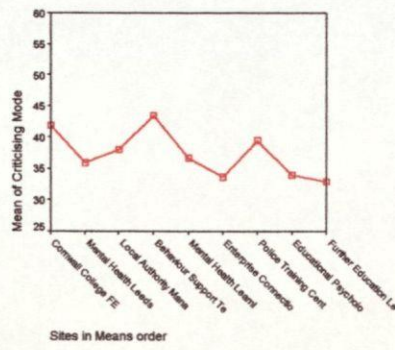
**Mode scores**

Finally, comparison of the Mode means of these groups revealed a further layer of detail about these exceptions. The following table and set of means plots give illustration, and then the four points of exception are elaborated.

**Table 4.22. Comparison of the Mode Means by Selection of 9 Pilot Groups**

Comparison of the Significance of Difference between Mode Means by the Selection of 9 Groups										
	HIGHEST			MIDDLE			LOWEST			
	Site 12	Site 4	Site 7	Site 1	Site 15	Site 5	Site 3	Site 6	Site 2	
MODE	FE Lecturers Dorset	Educational Psychology Trainees	Police Officers in Training	Psychometric Interpreters	Mental Health Workers	Behaviour support Teachers	Local Authority Managers	Psychiatric Personnel	Catering Students	NORM
CRITICISING	32.90	33.92	39.47	33.57	36.56	43.44	38.00	35.90	41.80	37.1
MARSH/MALLOWING	32.10	33.17	36.79	32.57	35.44	36.11	33.57	41.40	40.36	36.0
STRUCTURING	59.90	59.08	61.89	55.71	59.33	60.00	54.62	57.80	57.14	58.0
NURTURING	60.60	63.33	59.37	59.14	59.06	63.44	56.24	58.50	57.42	59.1
ACCOUNTING	55.40	54.75	57.84	53.71	53.00	58.78	52.05	50.60	54.92	54.5
COOPERATIVE	60.70	59.58	57.05	58.14	54.06	59.89	55.76	57.60	59.86	57.8
SPONTANEOUS	49.00	52.17	53.21	49.45	55.28	58.78	51.29	47.10	48.96	52.0
COMPLIANT/RESISTANT	34.80	33.50	32.53	39.00	38.06	39.89	36.33	38.00	39.54	37.0
IMMATURE	24.40	29.17	29.74	28.29	29.67	36.11	33.43	30.00	33.58	31.2
FFI	2.79	2.66	2.57	2.50	2.40	2.34	2.30	2.25	2.18	2.42

Figure 4.13. Selection of 9 Pilot Groups Comparison Plots





### Elaboration on the four points of exception

- a) The make-up of the Police Officers' Central Balance and Parent ratios was revealed. There were high scores for all four Parent Modes, negative as well as positive. Those for CRITICISING and MARSHMALLOWING were the third highest, while the STRUCTURING score was the highest of all the groups and NURTURING fairly high up, see the table above. This fits with the social reality of their professional role and the fact that they were a group carefully selected for development as trainers.
- b) With regard to the Psychometric Interpreters, examination of their four Child Mode scores threw new light on the previous hypothesis. This was because the high Natural Child Ratio was calculated from a fairly low SPONTANEOUS score and a very low IMMATURE score, while the low Socialised child Ratio was calculated from a fairly high COOPERATIVE score and a very high COMPLIANT/RESISTANT score. So the picture for this group was more about mature individuality and an ability to relate well with others, along with indications of a certain lack of solid psychological adjustment as a group. The Mental Health Workers, on the other hand, had a simpler pattern in the formulation of their Child ratios, in which SPONTANEOUS was quite high and IMMATURE low, while COOPERATIVE was quite low and COMPLIANT/RESISTANT quite high. The picture here, therefore, indicated mature and highly creative individuality and less positive socialisation. These features were a realistic match with the respective professional demands on these two groups and may have reflected the fact that some of the Psychometric Interpreters were 'women returners' to Further Education whose educational pathway had been disturbed.
- c) The pattern of Mode scores for the Behaviour Support Teachers was unexpected but explained the seeming anomalies in their ratio scores. Their five positive Mode scores were high, as one would expect, but so were their negative ones, particularly CRITICISING and COMPLIANT/RESISTANT. The high negative Parent scores may indicate that these issues are not tackled in the professional demands of the school culture. They may in fact be a good fit. The high COMPLIANT/RESISTANT score was mostly made up from items testing compliance rather than resistance, though three group members also scored highly on resistant items, and most scored highly on 'anxious'. Maybe this supports the hypothesis noted above about their motivation for this type of educational work. Study of their Average Profile (Appendix B.18.) showed that the ranges and standard deviations for the means were remarkably low compared with the Norm, though the pattern Mode by Mode was similar. This demonstrated a group

conformity of scoring perhaps explained by the fact that this group had been selected for and worked as a team. The teachers' positive Child Modes were high, especially SPONTANEOUS, see the table above, but the negative Child Modes were also very high which indicates both immaturity and lack of psychological adjustment. It is an interesting fact that these teachers had chosen to work with children whose profiles might well have similar features. It would be interesting to investigate whether this profile pattern is common amongst other groups of behaviour support teachers.

- d) The Psychiatric Personnel scored much lower on CRITICISING than the Behaviour Support Teachers so that, even though their STRUCTURING score was not quite so high, their Control ratio was excellent. However their MARSHMALLOWING score was very high, which explained the reverse pattern for their Care ratio, which was low.

It could be seen from these observations that each layer of analysis brought the Profile into sharper focus, illuminating key features of the group. Using the three tables in turn, Central Balance, Ratio scores and Mode means, anomalies were noted and followed through to track down the significant and relevant features, in order to check out how they might match with social and theoretical factors.

### **Features of the Three High Scoring Groups**

For the highest scoring FE Lecturers Group, the first anomaly was on the ratio table where Natural Child Ratio showed up very high. It turned out from examination of the Mode means that the Natural Child Ratio was calculated from a medium SPONTANEOUS score and a very low IMMATURE score. The earlier indication of a possibly highly individualistic, spontaneous group had to be modified therefore. This group now seemed to show evidence of being very 'grown-up' and only moderately individualistic, though psychologically well adjusted (low COMPLIANT/RESISTANT). The other positive Modes were all high, while the two negative Parent Modes were low, showing the make-up of the other Balance and Ratio scores.

Further examination of the summary statistics displayed on the Average Group Profile (Appendix B.13.) can then be used to bring extra features to light. In this case it was revealed that the pattern of range and standard deviation of the profile means was different from the Norm. More evidence of conformity in general was found, but particularly in the four negative Modes, which was the reverse of the Norm pattern. However, in spite of a lower score on SPONTANEOUS, the usual highly diverse character of this Mode as evidenced through the range and standard deviation

statistics was maintained. According to the administrator's report, this profile accurately indicated a group of very mature and positively motivated professionals.

Examining the Educational Psychology Trainee Group's data in the same way, a similar pattern with the same range of features was found, but it was less extreme, therefore fitting a similarly well-adjusted group who were, however, less mature.

Initially the third group, the Police Officers, looked as though its pattern was again similar, allowing for the Parent score differences discussed above. However, the key feature for this group was the elevated ACCOUNTING score. From the professional point of view, it could be argued that this Mode would have been emphasised in training, as police officers need to do swift and efficacious reality assessment in order to take the required emergency actions that are an inevitable part of their work on occasion. At a fine detail level, an anomaly for this group was the reduced range and standard deviation for SPONTANEOUS, showing it as less diverse than usual. There was a lack of variability in this Mode, therefore, compared with many groups, which may be connected with the fact that on the whole police officers don't go round doing their own thing in their own way, but have to conform strictly to the law.

These three groups, in spite of having many high scoring features in common, also showed idiosyncratic features that turned out to be relevant to the particular nature of the group.

### **Features of the Three Middle Scoring Groups**

One of these groups, the Behaviour Support Teachers, has already been discussed in some detail above. The other two groups, the Psychometric Interpreters and the Mental Health Workers, made more of a pair. For instance, they both had lower ACCOUNTING and Total Positive Child scores in their Central Balance. It was possible that a lowered ACCOUNTING score would contribute to the likelihood of greater Parent and Child imbalance. There was no clear pattern to show this, however, see Table 4.21. There was evidence from the deeper analysis of these groups, see examples above, that lower ACCOUNTING did occur on the same profiles that revealed difficulties at Child Mode level.

In terms of Parent scores, all of these middle groups had higher Care than Control ratios, and professional demands may account for this elevated emphasis. However, these ratios were made up from different Mode balances:

- The Psychometric Interpreters had very low scores for both control Modes, suggesting that the element of directiveness and decision-making was a low priority. They also demonstrated high quality care by scoring very high on NURTURING and low on MARSHMALLOWING.

- The Mental Health Workers had Parent ratio and Mode scores very similar to or higher than the Norm, i.e. well balanced and positive, with the higher emphasis on Care.
- The Behaviour Support Teachers had an elevated STRUCTURING score but an even higher CRITICISING one (see above) thus bringing their Control ratio down, whereas their very high NURTURING score, combined with low MARSHMALLOWING created a high Care ratio.

In contrast to the other two groups, therefore, the Behaviour Support Teachers put a lot of energy into Control, doing much of it positively but some negatively as well. Their institutionalised working context with children in difficulties in a variety of schools is likewise completely different from the Mental Health Workers caring for and teaching adults with learning disability mostly in their own homes, and the Psychometric Interpreters doing individual interview work involving personal and career counselling and guidance. Reference to the detailed summary statistics on the Group Profiles showed that the Psychometric Interpreters (N=7) had the most variability for their ACCOUNTING Mode, a range of 27 and Standard Deviation of 8.98. This accurately reflected the reality of the set of extremely different people making up the group. However, on the other hand, what is also clear from their consistency of high scoring on NURTURING is the effect of the strong focus on this Mode in their training. Similar consistency is shown on COMPLIANT/RESISTANT, where there was a low range and standard deviation, so the high group mean here is not the result of 'outliers', and the group score suggests possible difficulties with hang-ups. It is important to note that although these figures seemed to illustrate quite accurately the characteristics of this particular group, verified by social observation, it was a very small sample and it would be unwise to make any generalisations based on these data.

The Mental Health Workers group (N=18) had most variability for CRITICISING Mode in contrast to the other three Parent Modes. There were some outliers here at the high end of the range, which were confirmed by administrator's report to be accurate of those few individuals. The other Mode with an out-of-the-ordinary characteristic of conformity compared with the Pilot Norm was IMMATURE which showed a mean near the Norm but an unusually low range and standard deviation indicating that as individuals these people had some IMMATURE characteristics in common. Their statistical characteristic of a low mean for COOPERATIVE with fairly high range and standard deviation might indicate, on the other hand, that their ways of relating socially were diverse, and that they didn't have much in common socially. Cross data checking, as above, again confirmed these points.

What was clear was that each group's idiosyncratic profile features, when examined in detail, suggested interesting correlations with the personal and social facts about the groups, and explanations in terms of professional contexts and demands.

### **Features of the Three Low Scoring Groups**

The lowest scoring groups showed subtle variations on the Central Balances table, see page 143. Total Positive Parent was still elevated, but the difference between that score and the Total Positive Child was less, except for the Psychiatric Personnel, whose Total Positive Child score was the lowest of any group. Perhaps there is a link here with the effect of working conditions in psychiatric institutions, and/or the type of person choosing to work in this field. The Local Authority Managers' lowered Total Positive Parent score, mentioned above, similarly reflects professional context and expectation. ACCOUNTING scores were low for these two groups, but not for the students.

For this trio of groups, all the ratio scores were somewhat or very low in comparison with the Pilot Norm, with the exceptions of Local Authority Managers' Care ratio and Psychiatric Personnel's Control ratio as outlined already above in the exceptions section, see page 145.

At Mode level, the picture was clearer. The Local Authority Managers' positive Mode scores were generally lower, but their negative Mode scores were uneven. MARSHMALLOWING was usefully low and COMPLIANT/RESISTANT was near the Norm, whereas CRITICISING and IMMATURE were both higher than average. The wide ranges identified in the summary statistics for IMMATURE and for ACCOUNTING may be linked to the fact of their widely diverse range of managerial positions. Their negative Mode statistics might denote a certain setness in traditional ways, indicated by the COMPLIANT/RESISTANT low range and standard deviation, and reinforced by the administrator's report.

The Psychiatric Personnel had three positive Modes near the Norm but then fell considerably below it on ACCOUNTING and SPONTANEITY, which showed a lower range and standard deviation than usual. This was similar to the students, who also had a low SPONTANEOUS score, though this retained the usual high diversity factor for this Mode.

The Catering Students were inevitably also the youngest group; 44 out of 50 were under 20 and the rest between 20 and 29. Their profile has interesting characteristics from a social/psychological point of view, which will be referred to further in Chapter 5. On the whole, apart from the low SPONTANEOUS score, their positive Modes were near the Norm, but all their negative Modes scores were high, which rendered their ratios, including their FFI, the lowest of all



groups. Detailed statistics on their profile revealed considerable variability of scoring, however, as shown by the higher than usual ranges with fairly high standard deviations, and IMMATURE Mode demonstrated this to an exceptional degree. The most conforming Mode was COOPERATIVE, with a high mean but relatively low range and standard deviation. These two Mode scores in particular might have been evidence of their developmental stage in which peer norms are very significant and of top priority. A generalised hypothesis for this group was that psychological and social immaturity and therefore lack of psychic integration 'normal' for that age group accounted for the phenomena, which can be explained theoretically, see Chapter 5 and page 130 above.

## HIGHEST AND LOWEST SCORERS

### Introduction

The data concerning the highest and lowest scorers were analysed in two main ways to provide further evidence to support the consistency of the theoretical model with regard to the positive and negative Modes, and so also convergent and divergent construct validity of the instrument:

1. The ten highest and ten lowest scorers were treated as two 'groups', and descriptive and comparative statistics were obtained using SPSS in the same way as previously.
2. The five highest and five lowest scorers' data were analysed as individual cases from the following perspectives:
  - a) Their FFI profiles.
  - b) Knowledge of their professional context.
  - c) Confidential reports from their Pilot administrator (when possible), solicited with no information in advance as to the reason for the in-depth enquiry.

This was in order to provide cross data evidence of social verification, or otherwise, through the process of triangulation, as advised by Neuman (1994) "*Measurement improves when diverse indicators are used.*" (page 141).

First of all, the question of whether the highest or lowest cases were 'outliers' in the technical sense (Hair et al 1995) was considered. Initially, two cases falling well beyond the span of other results were investigated and found to "*arise from a procedural error*" (page 58), namely SPSS data entry errors. Once corrected, the five highest and five lowest cases were then analysed to check whether any should be excluded by reason of their difference from the average, or 'outlying' position. These cases were "*unique in their combination of values across the variables*", but fell

"within the ordinary range of values on each of the variables" (page 58). Following advice from these authors, such cases were retained for analysis as they provided interesting evidence of ways in which the instrument results identified more extreme expression of the variables. The number of cases was expanded to ten to form both a Highest and Lowest Scoring Group to have more statistically valid samples.

### Sample Characteristics

**Table 4.23. Personal Details of Highest Scoring Group**

	FFI	Gender	Ethnicity	Age	Knowledge of TA	Professional Level
1	3.90	F	White	Over 60	None	Manager
2	3.74	F	White	40s	A lot	Basic
3	3.53	F	White	50s	Little	Basic
4	3.45	M	White	20s	None	Basic
5	3.34	F	White	40s	Little	Manager
6	3.33	F	White	50s	Some	Manager
7	3.29	F	White	50s	Little	Director
8	3.29	F	White	50s	None	Manager
9	3.29	F	White	50s	Some	Manager
10	3.26	F	White	30s	None	Basic

**Table 4.24. Personal Details of Lowest Scoring Group**

	FFI	Gender	Ethnicity	Age	Knowledge of TA	Professional Level
1	1.58	F	White	Under20	None	Basic
2	1.65	M	White	Under20	None	Basic
3	1.67	M	White	20s	None	Basic
4	1.70	M	White	20s	None	Basic
5	1.71	M	White	20s	None	Basic
6	1.72	M	White	Under20	None	Basic
7	1.75	M	White	40s	None	Manager
8	1.75	M	Not Say	Under20	None	Basic
9	1.78	F	White	Under20	None	Basic
10	1.81	F	Asian	20s	None	Basic

**Table 4.25. Summary of Differences According to Personal Variables**

Group	Gender	Ethnicity	Age	Knowledge of TA	Professional Level
HIGH	9 female 1 male	10 white	7 over 50 1 40s 1 30s 1 20s	1 a lot 2 some 3 a little 4 none	1 director 5 manager 4 basic
LOW	3 female 7 male	1 Asian 1 not declared 8 white	1 40s 4 20s 5 under 20	10 none	0 director 1 manager 9 basic

The ratio of women to men in the whole Pilot sample was 1.6. In the combined groups it was 1.5, so overall it was as would be expected. However, as can be seen from the above table, the gender balance was different in the two groups. Other factors were also balanced differently:

- The HIGH Group was nearly all women, older, at a higher level of professional responsibility, had variable knowledge of TA and was exclusively white.
- The LOW Group was mostly men, younger, at a lower level of professional responsibility, knew no TA and was almost all white.

## **Consideration of the Five Personal Variables**

### **1. Gender**

Females scored higher overall in the total Pilot sample, see Gender section on page 125. These results endorsed the possibility that females may be more functionally fluent. For instance, the only areas of management in the UK where women outnumber men are in Personnel and the Actuarial/Insurance/Pensions function groups. These posts require high levels of rapport and relationship-building skills (Institute of Management 2001). However there is also the possibility that design of the instrument makes it more likely to be scored higher by females, that it is in some way 'female-friendly'. Refinement will attempt to redress any tendency in this regard. A further point to note with regard to gender in the LOW Group is that of the seven young students, three were actually female, so it could be youth and student status that account for some of the low scoring, rather than gender. The other three low scorers, in their 20s or 40s, not students, were all male, so this might indicate a link with gender.

### **2. Ethnicity**

The ethnic difference between the high and low scorers has almost certainly more to do with the cultural and social make-up of the student group than any differences based on ethnicity. These data are not suitable for relevant commentary on this matter, see also pages 112 & 121.

### **3. Age**

The differences here endorsed the findings with regard to age groupings, see Age section on page 128. It is therefore possible that maturity, and/or age and life experience, are features of Functional Fluency. There is also the possibility that age brings more know-how about answering questionnaires to personal advantage and that the youngsters were too naïve to do this.

### **4. Level of Professional Responsibility**

This has already been shown to link in a logical way with the age factor, see page 132, and this was repeated in these data.

### **5. TA Knowledge**

There was slight evidence that knowledge of TA may have some connection with high scoring. As can be seen from the tables above, while 100% of the LOW Group had no TA

knowledge, only 40% of the HIGH Group had none. Three people had a little, two had some and one had a lot, though these were not connected with the order of scoring.

### Exceptions in the groups

- In the HIGH Group the exception was a young white man in his 20s at basic level. The key differences were gender and age.
- In the LOW Group the exception was an older white man in his 40s at manager level. The key differences were age and level of professional responsibility.
- Neither exception had any TA knowledge.

Both these cases are presented in detail below as part of the analysis of individual high and low scorers.

### Features of the Highest and Lowest Scoring Groups

The previous framework for analysis was used, focussing in turn on Central Balance, Ratios and Modes to give increasingly in-depth detail.

**Table 4.26. Comparison of Central Balances by Highest and Lowest Scoring Groups**

<b>Central Balances for the Highest &amp; Lowest Scoring Groups</b>			
<b>Scores</b>	<b>HIGH GROUP N=10</b>	<b>LOW GROUP N=10</b>	<b>NORM</b>
<b>Total Positive Parent</b>	128	103	117
<b>ACCOUNTING</b>	116	96	110
<b>Total Positive Child</b>	121	101	110

Both groups had the usual pattern of an elevated Total Positive Parent, though this was much less obvious in the LOW Group, whose Balance was more level. These Central Balances did match their FFI level, indicating that all Modes were involved in the elevation and depression of these scores. The two sets of scores were starkly different, with the HIGH Group having an FFI showing positive scores nearly 3½ times more positive than negative, and the LOW Group an FFI showing scores just less than 1¼ times more positive than negative, see the two Average Group Profiles in Appendices B.22 and 23. This difference gave a glimpse of the possibility that social offenders or mental health patients might come out with FFI scores of less than 1.

The ratio scores were similarly extremely different for the Highest and Lowest Scoring Groups, with some significant balance features, see the next table.

**Table 4.27. Comparison of FFI and Ratio Scores by Highest and Lowest Scoring Groups**

<b>FFI &amp; Ratio Scores for the Highest &amp; Lowest Scorers</b>			
<b>Ratios</b>	<b>HIGH GROUP N=10</b>	<b>LOW GROUP N=10</b>	<b>PILOT NORM N=302</b>
Parent Ratio	2.21	1.16	1.60
Child Ratio	2.47	1.16	1.62
Parental Control Ratio	2.21	1.11	1.57
Parental Care Ratio	2.21	1.21	1.64
Socialised Child Ratio	2.18	1.20	1.57
Natural Child Ratio	2.86	1.12	1.68
<b>FFI</b>	<b>3.44</b>	<b>1.71</b>	<b>2.42</b>

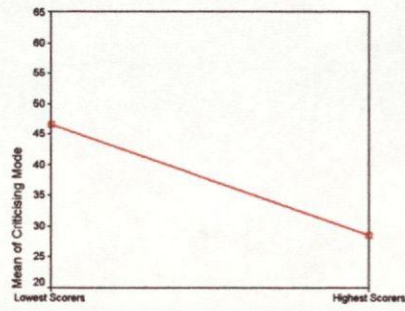
The HIGH Group's ratios were over twice as positive as negative, whereas the LOW Group's were only just more positive than negative. Both groups showed even balances between elements, except that for the HIGH Group the Natural Child Ratio, and therefore the Child Ratio, were elevated. The next table showing comparison of Mode scores for both Groups indicated how this came about.

**Table 4.28. ANOVA Comparison of Highest and Lowest Scoring Groups**

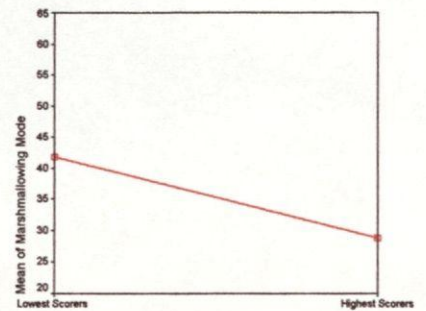
<b>Comparison of Significance of Difference between Mode Means by HIGH and LOW Scoring Groups</b>				
<b>MODE</b>	<b>PILOT NORM N=302</b>	<b>HIGH GROUP N=10</b>	<b>LOW GROUP N=10</b>	<b>Significance (p)</b>
CRITICISING	37.1	28.50	46.80	<.001
MARSHMALLOWING	36.0	28.80	42.00	<.001
STRUCTURING	58.0	64.10	51.50	<.001
NURTURING	59.1	63.80	51.20	<.001
ACCOUNTING	54.5	58.00	48.40	<.001
COOPERATIVE	57.8	61.30	53.00	<.001
SPONTANEOUS	52.0	59.70	47.70	.002
COMPLIANT/RESISTANT	37.0	28.40	43.80	<.001
IMMATURE	31.2	20.70	42.80	<.001

This table together with the set of means plots on the following page show the details of the Mode patterns and balances of these very different groups. The ways in which TA theory is illustrated in the differences of pattern and balance are important because they indicate some possibilities of how the instrument could operate in terms of prediction and of diagnosis.

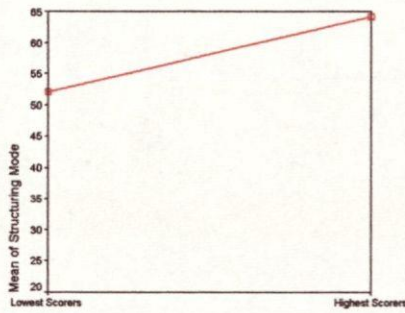
Figure 4.14. Highest & Lowest Scoring Groups Comparison Plots



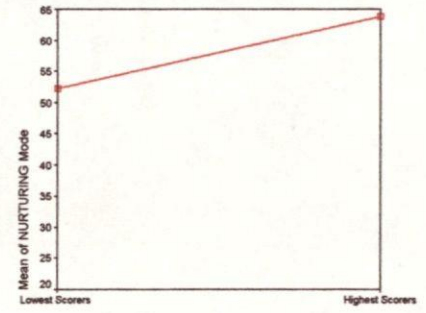
Scoring Level Groups



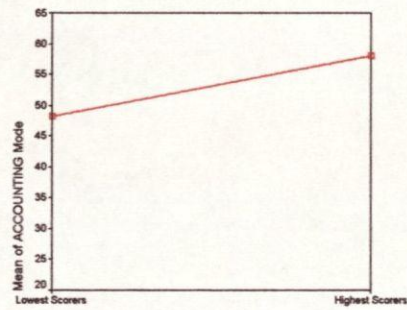
Scoring Level Groups



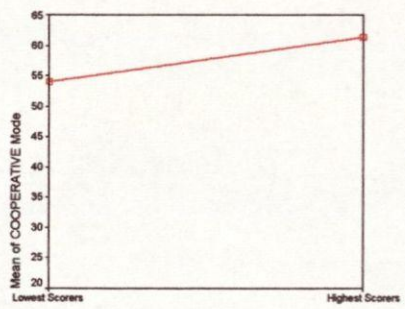
Scoring Level Groups



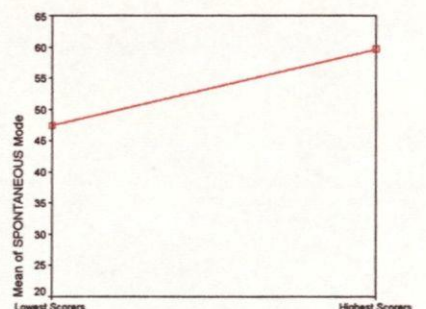
Scoring Level Groups



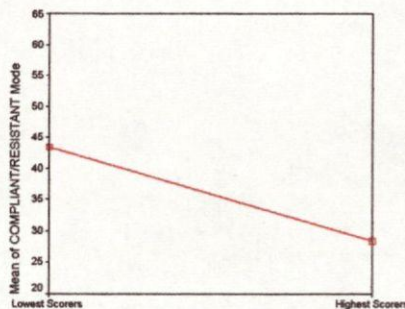
Scoring Level Groups



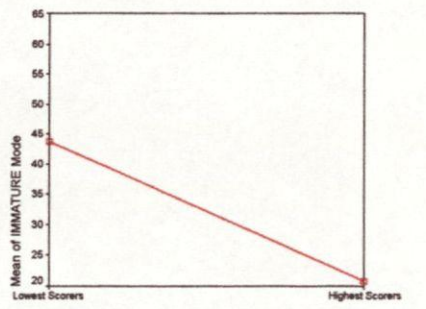
Scoring Level Groups



Scoring Level Groups



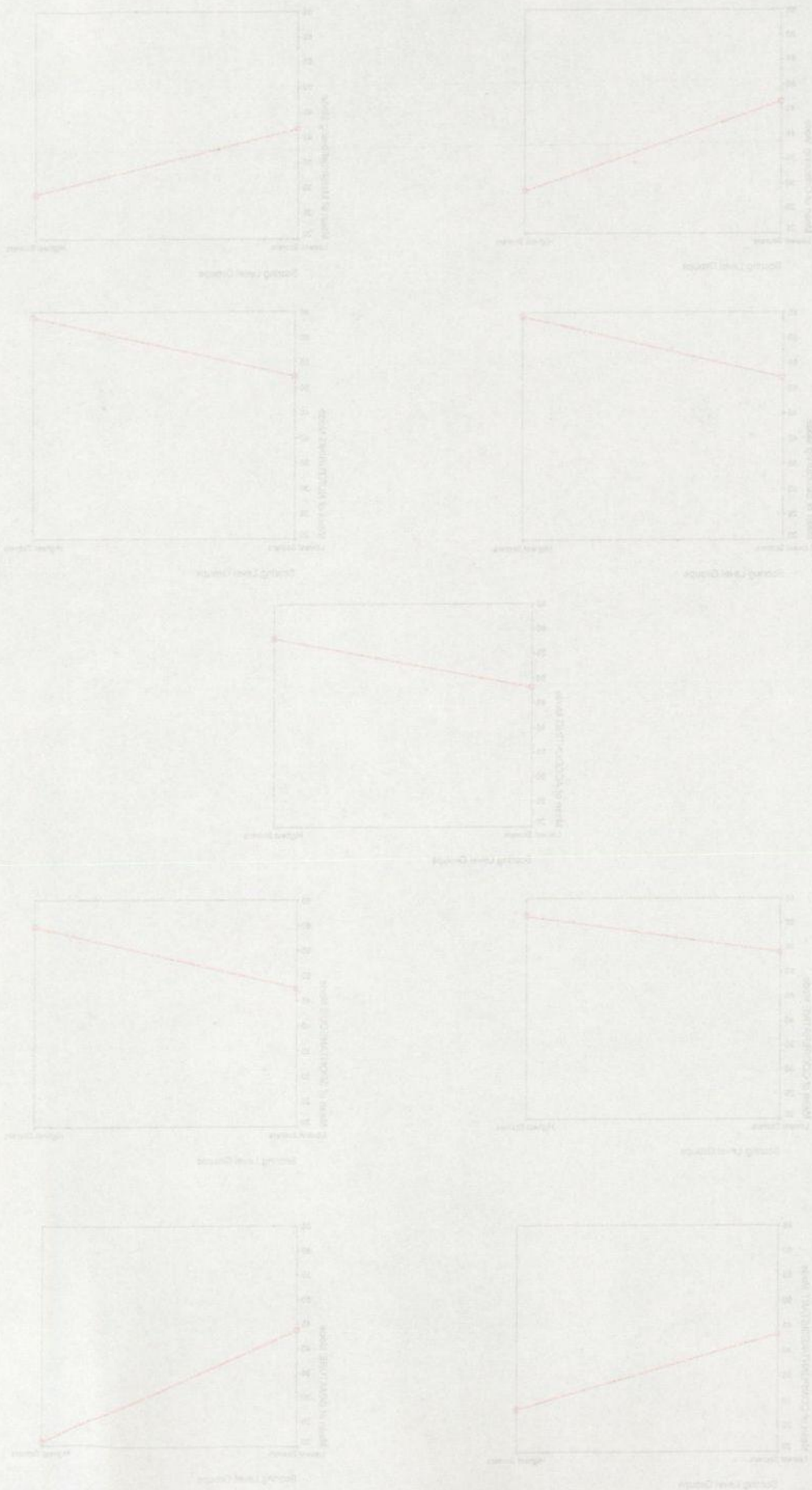
Scoring Level Groups



Scoring Level Groups



Figure 4.14 Highest & Lowest Scoring Groups Comparison Plots



### **Profile of the Highest Scoring Group**

The HIGH Group Profile showed a most highly desirable scoring pattern according to TA theory:

- There was even balance between Control and Care elements.
- There was even balance between STRUCTURING and NURTURING.
- Positive Parent Modes were more than twice as positive as the negative Parent Modes.
- ACCOUNTING was high in relation to the Total Positive Parent and Total Positive Child, but not higher.
- There was even balance between COOPERATIVE and SPONTANEOUS Modes. (The only group in the Pilot study to show SPONTANEOUS Mode as high as the other four positive Modes).
- Positive Child Modes were more than twice as positive as the negative Child Modes.
- IMMATURE Mode was much the lowest Child Mode score. This had the effect of making the Socialised and Natural Child elements uneven, but this imbalance could be said to be desirable so long as there is reasonable balance between the positive Child Modes (COOPERATIVE and SPONTANEOUS) as there was in this case, see above.
- All negative Modes scored only approximately 40% of the possible total, whereas in the Norm Profile they scored 50%.

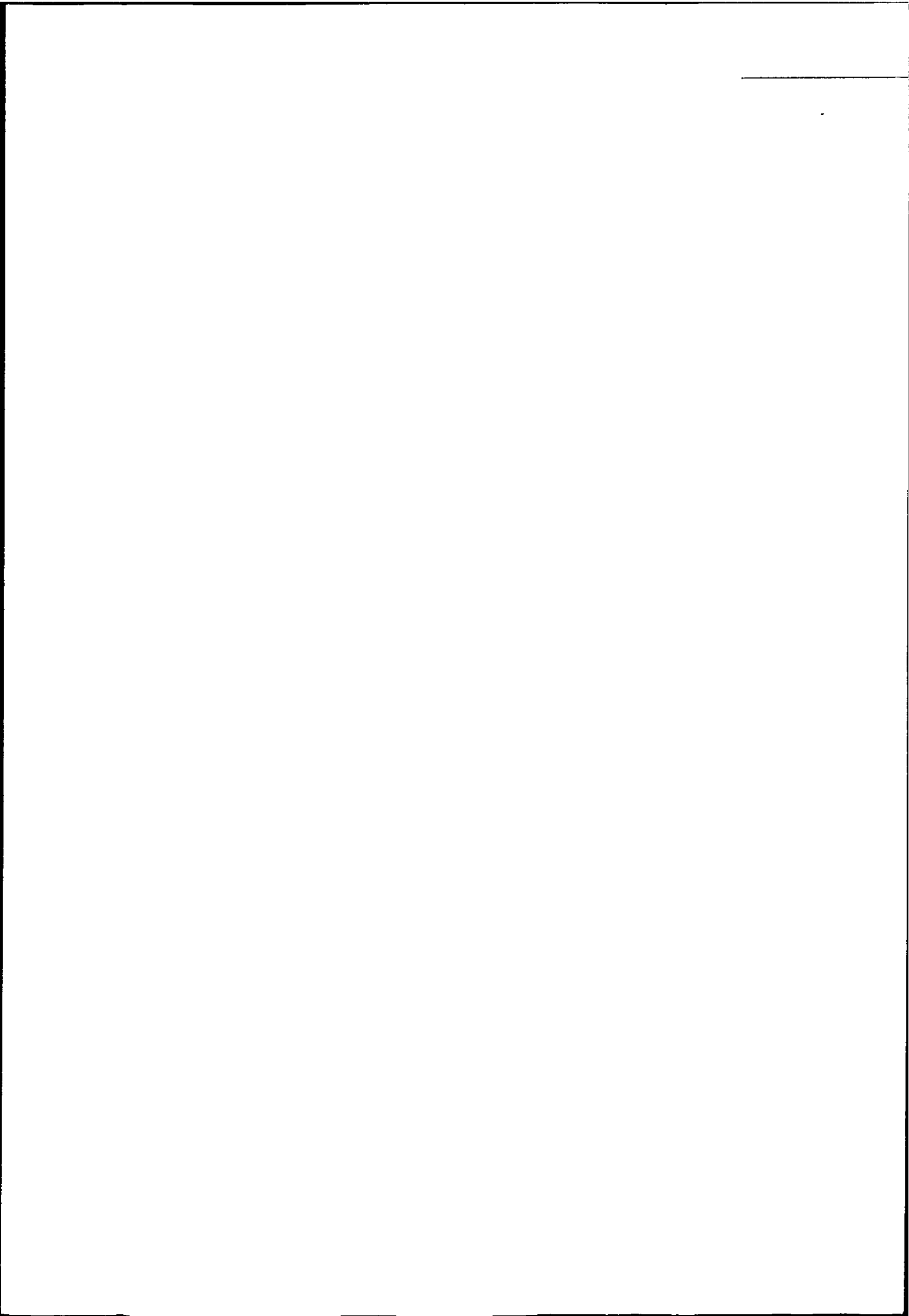
These features on an individual profile would be said to indicate a person with high energy and drive, capable of positive execution of authority with effective control and care; a person who would assess current reality to a high degree and use that assessment to fuel positive social and individual endeavours (positive Modes). Energy would not be wasted going over a range of old and/or inappropriate behaviour patterns (negative Modes). There would be a good degree of psychological integration. It would be likely that such a person would be experienced as contactful and impactful. Examples of such people taken from the five highest scoring individuals are presented below and in further theoretical discussion in Chapter 5.

### **Profile of the Lowest Scoring Group**

The LOW Group Profile gave a very different impression. Scoring on negative and positive Modes was similar as evidenced by the set of ratio scores. Significant features of this scoring pattern were:

- There was imbalance between Control and Care caused by elevated CRITICISING Mode.
- The positive Parent Modes were only just higher than the negative Parent Modes.
- Central Balance was even but with depressed scoring, thus ACCOUNTING Mode was low.





- There was imbalance between COOPERATIVE and SPONTANEOUS Modes, with the latter depressed as in the Pilot Norm.
- The positive Child Modes were only just higher than the negative Child Modes.
- There was a balance between COMPLIANT/RESISTANT Mode and IMMATURE Mode. The imbalance between the two Child elements was caused in this case by the lowered SPONTANEOUS score, these factors combining thus to indicate lack of mature individuation.
- All negative Modes scored approximately 60% of the possible total in comparison with the 50% of the Pilot Norm.
- The high range and standard deviation for NURTURING Mode demonstrated diversity of scoring pattern in contrast to the Pilot Norm.

This profile was an intensified version of the pattern for the Under 20 Age Group. All scores and ratios were more negative and particular negative features were increased. This means that the pattern may be explained partly by factors to do with normal developmental stage, but that aspects of the pattern may give cause for diagnostic concern, particularly if they were to be manifested by someone in an older age group. For instance, the low Parent ratios may indicate developmental lack of experience of social responsibility for people not yet twenty. However, this feature for someone in their forties might indicate problems in effective execution of control and care when in authority, see the example cited on page 165.

In addition, the elevated negative Child Mode means might denote not only immaturity but also a greater than usual propensity to psychological and social difficulties. The depressed ACCOUNTING score might indicate lack of the reality assessment that should help with developmental and social learning processes.

### **Analysis of the Highest and Lowest Scoring Individuals**

The analyses of the five highest and lowest scoring individuals provided dramatic illustration of how the FFI profiles portrayed important behavioural characteristics that could be verified through cross data checking. Administrators were contacted by phone and asked if they could add any further data to illuminate these respondents' answers to the FFI. Cases were referred to only by ID number and care taken to avoid any indication of the interest in these data, in order not to skew the administrators' responses. Thus open-ended questions such as "What do you know about No. X?" were used.

Department of Economics

Chicago, Illinois 60637

Dear Sirs:

I am writing to you regarding the

application for a position in your

department.

I am

enclosed find a copy of my

résumé and a list of references.

I am confident that my background

and qualifications make me a

strong candidate for the position.

I would be pleased to discuss my

qualifications with you at any

time.

Sincerely,

[Signature]

[Address]

[City, State, Zip]

[Phone Number]

Enclosure

I am enclosing a copy of my

résumé and a list of references.

I am confident that my background

and qualifications make me a

strong candidate for the position.

Sincerely,

### **The highest scoring individuals.**

These five cases were a diverse set of individuals from varied professional contexts. Their common characteristics were that they were white females over forty, except for the fourth highest scorer who was a white male in his twenties. It was possible to collect triangulation data on four out of the five cases. This revealed that each person was considered exceptional in her or his Pilot group, and was well known to the respective administrator for one reason or another, which was in itself telling. Each of these four profiles produced high ratios, varied Central Balances and idiosyncratic Mode scores. The set of cases gave examples of the features of the high scorers outlined above.

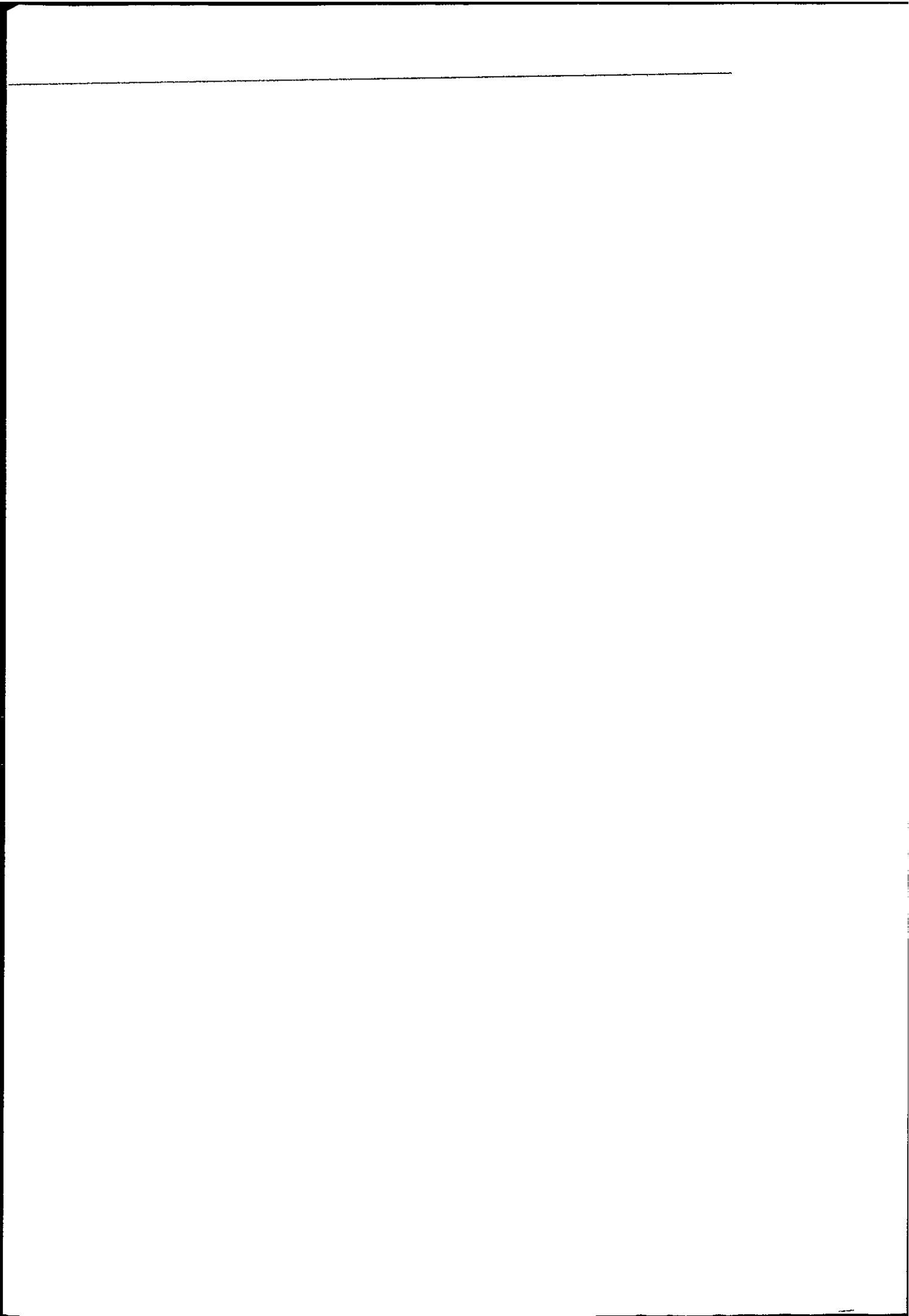
#### **Case one**

The highest scorer was referred to by her administrator as an "extraordinary person, an absolute one-off". She was over sixty and recently widowed. She came originally from a working class background but went to an academic school where she was a high flyer. After college, she married and had two children quickly, followed by three more spaced out over the years until she was about forty. Her husband suffered from ill-health, so with him, the five children and many and varied social projects including working with refugees and in the prison education service, she was greatly into Parenting in the full TA sense of the term. Politically a left-wing socialist, she became "the bane of the Social Services Department", but was also the first person they turned to when in need of someone to deal with a difficult situation. Working within Adult Education and also as a humanist minister, she was said to "walk her talk" but not to "suffer fools gladly", and was "game for anything". A final comment made was that "she enjoyed a drink". There were Mode scores on her profile that could be related to this picture:

- Very high NURTURING Mode and higher Care than Control elements.
- Low CRITICISING Mode with high STRUCTURING Mode giving a high Control ratio.

The following features matched details of her personal and professional life as reported:

- ACCOUNTING was surprisingly low but might a) contribute to an impression of someone ruled more by heart than head and b) be linked to sometimes considerable alcohol intake.
- Very high COOPERATIVE Mode reflected the motivation, talent and skills she demonstrated for creating rapport with all sorts of people.
- Lower SPONTANEOUS Mode might have revealed a lack of focus in life for doing things just on her own behalf.



- In spite of the low SPONTANEOUS score, the high Natural Child ratio reflected the low IMMATURE score, denoting a high degree of mature individuation.
- The high Socialised Child ratio included a low COMPLIANT/RESISTANT score indicating a paucity of 'hang-ups'.

It can be seen how imbalances as well as balances illustrated aspects of this person's pattern of social functioning. Were this a 'real case' in which feedback would be given according to the contract for doing the instrument, then the phenomenological aspect of the implications of the scoring would be explored and ideas generated for possible change and development.

#### **Cases two and five.**

The second and fifth highest cases similarly were exceptional and because they were each part of an ongoing coherent group, more information could be obtained as to their status as group members.

Case two was described as "salt of the earth" but was occasionally considered by her administrator to be "a professional liability" if she flew off the handle when heavily provoked by one of the disturbed adolescents with whom she worked. Her manager's view was that although she was not "the standard counsellor type at all" she was actually extremely good with the youngsters. They really valued her, "she's the one they rate". On the occasions when she did flare up, her manager reported that she was able to reflect on it afterwards, understand the issues and fix the situation. Profile features indicating a basis for the professional and social reality were:

- Well balanced Control and Care.
- High STRUCTURING and NURTURING Modes with the latter somewhat higher, causing a slightly higher Care ratio.
- ACCOUNTING a little low in relation to the other positive Modes.
- COOPERATIVE Mode lower than SPONTANEOUS Mode.
- Low COMPLIANT/RESISTANT very low IMMATURE Mode.

It seemed that this person expressed her own personal point of view and feelings in a powerful and direct way, which traditionally was not part of a social work ethos, but might actually have assisted in the bonding process with the young clients. She was "real" with them, high SPONTANEOUS Mode. An increase in ACCOUNTING and COOPERATIVE might help in regulating her actual behaviour in the professional context to avoid inappropriate crises.

Case five, in contrast to the two cases above, had an extremely high ACCOUNTING score, and the administrator reported that she earned herself the reputation of being "opportunist" in her

Pilot group. She was keen, energised and took advantage of any situation to further her interests. The administrator reported that this was not to say she put others down or took advantage of them, but she was not willing to hang back and miss out because others were too passive to opt in. This woman, in her forties, had gained her place on the present course having achieved a part-time second degree while raising a large family. She was extremely successful both on placement and with assignment work. This, socially, was to an extent that the high efficiency might lose effectiveness were it to be perceived by others as too "pushy". Keen, quick-minded, interested and perceptive were all adjectives used about her by the administrator. It is possible that the slight lack of popularity she had was due to elements of envy amongst the other students. Her profile pattern illustrated these characteristics:

- All positive Modes were elevated showing the high energy involved effectively in Social Responsibility, Reality Assessment and Self-Actualisation.
- Central Balance had Total Positive Parent balanced almost exactly with Total Positive Child, with ACCOUNTING lower than these, but actually a very high score.
- CRITICISING and MARSHMALLOWING were similar to the Norm, i.e. not lower as for the other four highest scorers, making the Control and Care ratios just above average.
- Socialised and Natural Child elements were evenly balanced.
- SPONTANEOUS Mode was exceptionally high and markedly higher than COOPERATIVE Mode; evidenced by her motivation and energy to do things on her own account, sometimes somewhat regardless of others.
- Negative Child Modes were exceptionally low, so that the Socialised and Natural Child ratios were very high.

This could have been considered an example of the phenomenon of 'exuberant scoring', except that the two negative Child Modes were very low. It was possible that this person could gear the scores in her 'favour', given her specialist knowledge, except that the two negative Parent Modes were high. It may have been that the profile reflected this person's functional pattern reasonably accurately, particularly with regard to the two pairs of negative Modes. Were the instrument to be developed as a 360° personal development tool, manager, peer and client scores would also be taken into account along with the respondent's. This might be a productive way to unravel the subtle social tensions and stresses that this person's behaviour patterns undoubtedly engendered.

...the ... of ...  
...the ... of ...  
...the ... of ...  
...the ... of ...

...the ... of ...  
...the ... of ...  
...the ... of ...  
...the ... of ...

...the ... of ...  
...the ... of ...  
...the ... of ...  
...the ... of ...

...the ... of ...  
...the ... of ...  
...the ... of ...  
...the ... of ...

...the ... of ...  
...the ... of ...  
...the ... of ...  
...the ... of ...

...the ... of ...  
...the ... of ...  
...the ... of ...  
...the ... of ...

...the ... of ...  
...the ... of ...  
...the ... of ...  
...the ... of ...



#### **Case four**

The fourth highest scorer for whom there was cross study data was the exception to the all female, all older group members. This man was a police officer in his twenties who was also reported by the administrator as exceptional, but in quite a different fashion. He was doing a course for potential tutors for which members were picked by means of structured, performance related tests. This was a new course and so attracted those with appropriate talents and motivation. In volunteering to become trainers in the service, they probably had a different frame of reference from most police officers. This particular young man was a snow and ice climber who liked to pit himself against the elements. He was therefore well-organised, self-reliant and willing to take calculated risks. This was also evidenced in terms of personal relationships on his course in the way he chose to work alone at some points, but also sought feedback and interaction with peers for self-development and personal change, which is stepping out of line with the usual police culture (White 2000). It was considered of him that he would be likely to use his newly increased power of rank for rather than over people and would continue to be sensitive and considerate to others. There were aspects of his Mode scores that clearly illustrated these features, and also some that illustrated the male profile and the 20-29 year old profile, in that he had slightly elevated CRITICISING and IMMATURE Modes:

- Very even balance was shown in the Central Balance and all Parent and Child element ratios.
- Control element was considerably higher than Care, and Natural Child higher than Socialised.
- Positive Modes were high, especially STRUCTURING, ACCOUNTING and SPONTANEOUS, evidence of energy being put into positive Control, a high level of reality assessment and 'being his own person'.
- COMPLIANT/RESISTANT was very low suggesting few hang-ups.

This profile would therefore suggest someone levelheaded and well-balanced, self-motivated with positive leadership qualities, which would seem to fit with the personal and professional facts as reported.

#### **General comments on the highest scorers**

An important feature of these highest scorers' profiles was that the SPONTANEOUS scores were not depressed as in the Pilot Norm. The third case, for which there were no corroborative details, made an exception to this. However, it appeared to be an example of the 'restrained' style of responding to the questionnaire, as the Mode scores themselves were more or less all low, but their pattern produced a high FFI and other ratios. In this case, as might be imagined, the

SPONTANEOUS score was again depressed. This seems to endorse the hypothesis that the SPONTANEOUS score is indicating a person's propensity to express unique uncensored individuality at an appropriate level of maturity. Both the theoretical assumption and its practical application were thus demonstrated. In summary these people seemed powerful, impactful characters, successful and talented, greatly skilled at working with others (actually or potentially). They were not, however, always comfortable to have around.

#### **The lowest scoring individuals**

There was much less cross data evidence for these cases, three of whom were in the student group, one was an inner-city teacher and one an inner-city youth worker. All were male, except the lowest scorer of all. They were white and had no TA knowledge. The seventh lowest scorer in the overall group of ten, the exception in the group, was also included for this analysis because this was the only low-scoring case for whom there was detailed cross data evidence, .

These six cases were much more conforming and similar to the profile for the LOW Scoring Group. The negative Modes tended to be higher and the positive Modes lower so that the element ratios were only just over one. In two cases there was an element ratio of less than one, for example the second lowest scorer had a Natural Child ratio of 0.88 and the fifth lowest scorer had a Control ratio of 0.89. It would have been valuable to have known how the former manifested his IMMATURE score, and how the latter his CRITICISING score in order to have obtained social evidence of these negative Modes.

An important common feature was the low ACCOUNTING scores for all five cases. These scores were lower than any of the averages for the Under 20, the 20-29 or the Male groups into which these cases fall. The association of this feature with these cases' low overall scores endorsed findings from other individual case studies in which a low ACCOUNTING score was a feature. This was further evidence that low ACCOUNTING in relation to other positive Modes indicated the likelihood of social or psychological difficulties.

There was high scoring on IMMATURE and (except for the fifth lowest scorer) high scoring on COMPLIANT/RESISTANT as well, so the hypothesis was that in these cases immaturity was combined with the propensity for hang-ups and a lack of current reality assessment.

In terms of the Parent Modes, the low positive Modes could be explained by youth and lack of personal and professional practice. However, two of the five cases were in teaching and social work respectively, and again it would have been useful to have had cross study data to refer to. One piece of information was that the latter person left his job before the group feedback date.

The following summary is constructed from the individual profiles of the five lowest cases.

**Table 4.29. Summary of Scoring Details of Lowest Five Scorers**

<b>Summary of Scoring Details of Lowest Five Scorers.</b>		
<b>Case</b>	<b>Observation on scoring pattern</b>	<b>Comment on possible meaning</b>
<b>Lowest Scorer</b>	All scores were negative in effect on the profile	This was someone struggling socially & with low self-esteem.
<b>2<sup>nd</sup> Lowest Scorer</b>	Probably the highest negative Mode scores in the Pilot study, except for MARSHMALLOWING. This & the low SPONTANEOUS score meant that the Natural Child ratio was less than 1	Someone able to function positively, but with powerful negative patterns showing immaturity & authoritarian attitudes.
<b>3<sup>rd</sup> Lowest Scorer</b>	Probably the lowest ACCOUNTING score in the Pilot study. Low ratios all round with emphasis on Natural Child element both positive & negative, & lack of Care element both positive & negative. Contrary to the Pilot Norm Total Positive Child came out substantially higher than Total Positive Parent.	A Special Needs teacher, immature & creative, struggling with Control & working out what to do for the best. (This person added to one of the Questionnaire questions, the only respondent to do so. "Would you TRY TO give clear instructions about what to do?" He then scored it 'likely'.)
<b>4<sup>th</sup> Lowest Scorer</b>	Even balances Parent/Child & between elements. ACCOUNTING very low & COMPLIANT/RESISTANT high.	Reasonably balanced person, liable to have hang-ups & to fail to account for current reality & potential consequences of actions.
<b>5<sup>th</sup> Lowest Scorer</b>	Total Positive Parent low in the Central Balance, see No 3 above. Elevated CRITICISING Mode causing Control ratio of less than 1. COOPERATIVE the highest positive Mode score.	An older student, possibly getting on OK with his peers but with a problem with authority going with a lack of social responsibility.

There was ample cross study data on the seventh lowest scorer mentioned above. He was older, in his forties, and working at managerial level. Generalised similarities between this man and the other low scorers were his low ratios, which included a Control ratio of less than 1. A difference of pattern was in the Central Balance in which Total Positive Child was the lowest, and ACCOUNTING was higher than the mean for the LOW Group, in fact near to the Pilot Norm. In spite of this all of the other positive Modes were depressed, especially SPONTANEOUS, and the negative Parent Modes were elevated. COMPLIANT/RESISTANT was as for the Pilot Norm but IMMATURE was elevated, so one would expect difficulties to have a basis developmentally rather than pathologically, i.e. a lack of social learning rather than inappropriate social learning. The administrator's report yielded the following information with regard to professional observations and discussions:

- This was a large, muscular, formidable looking character.
- He was seen as a loner, a challenge to engage in conversation, who did not socialise on the course and did his assignment alone.

- He went from social ritual stage straight into the job with no 'chit-chat'.
- He only attended the course at the instigation of his locality group (all women).
- He exhibited authoritarian attitudes ('my way is right - no negotiation'). This caused issues about how to be diplomatic. "If he didn't respect the authority of the other, he wouldn't take any notice", reported the administrator.
- There were said to be issues between him and his manager about who had control.
- He got a lot from doing a course on Influencing Skills and was positive while doing it.

This evidence supported the hypothesis above that this seemed like a case of arrested personal and social development leaving him at a loss as to how to build collaborative relationships or express his own individuality in a mature way. There was reported evidence of enduring influence from past others (shown here by high CRITICISING Mode with highest descriptor scores for 'blaming', 'dominating' and 'fault-finding'), which caused automatic urges to dominate others while reinforcing his own internal inhibition. This resembled a classic 'bully' pattern. The highest descriptor scores for COMPLIANT/RESISTANT were for 'anxious' and 'submissive'. The highest IMMATURE descriptor scores were for 'infantile', 'selfish', 'egocentric' and 'inconsiderate'. In terms of the positive Child Modes, the lowest scores for COOPERATIVE and SPONTANEOUS were 'confident', 'sociable' and 'zestful'.

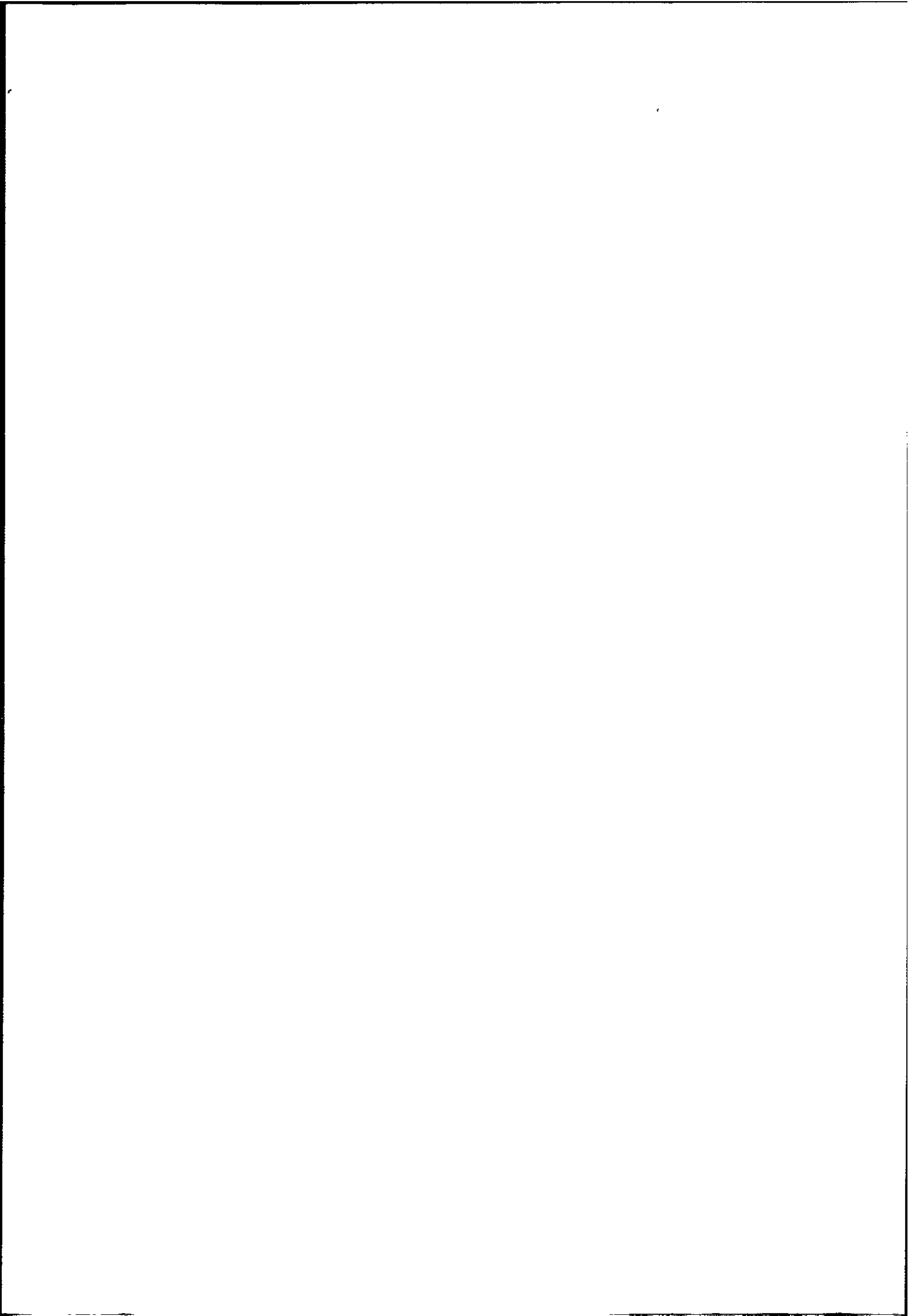
#### **Concluding comment**

This case demonstrated how the instrument provided layered evidence of someone's intrapsychic and interpersonal dynamics as manifested in behaviour. Such provision of clues as to the aetiology of personal or social difficulties is one of the purposes of the Functional Fluency Index. Transactional Analysis can be used to describe and explain the possible significances and implications, inviting ongoing personal insights and developing the self-awareness necessary for increasing emotional literacy and promoting positive behavioural change.

### **COMPARISON OF THE RESULTS FROM FORM A AND FORM B**

Forms A and B were designed to be equivalent. The Pilot Study was used as a way to compare the forms in order to stimulate appropriate refinement to this end. Several types of evidence were generated:

1. Average Profiles for each form, see Appendices B.24 & 25, and ANOVA comparison of results presented below.
2. Evidence as part of other major analyses:



- Reliability analysis (Cronbach's alpha) (see page 172).
- Factor analysis (see page 175).
- Test-Retest Studies analysis (see page 184).
- Pilot evaluations analysis (see page 186).

It was clear that methodologically it would have been preferable to organise each Pilot Group into halves to do either Form A or Form B, so that the two samples for the two forms would have been a better match. However, several factors militated against this, for example:

1. The organisation of the Groups was already complex and being done by a variety of people. It was considered more important to focus on the quality of the administration than on an extra element of organisational complexity.
2. Numbers in the Groups were mostly not known in advance.
3. Most important was the need for each Group to have consistent data; i.e. it was better that members of a group all used the same form.

Finally there was the fact that the Pilot groups did have an overall shared professional focus, and also within them had some variety of individuals (see details of Pilot Sample on page 110). The extra division of Pilot groups was therefore decided against, given that there were several ways for doing the necessary comparison, see list above.

**Table 4.30. ANOVA Comparison of Forms A and B**

<b>Comparison of Significance of Differences Between Mode Means of Forms A &amp; B</b>				
<b>MODE</b>		<b>Form A (N=177)</b>	<b>Form B (N=125)</b>	<b>Significance (p)</b>
CRITICISING	-	36.90	37.50	.474
MARSHMALLOWING	-	34.84	37.66	.001
STRUCTURING	+	57.86	58.16	.640
NURTURING	+	59.20	59.06	.820
ACCOUNTING	+	54.29	54.82	.449
COOPERATIVE	+	56.58	59.54	<.001
SPONTANEOUS	+	53.94	49.23	<.001
COMPLIANT/RESISTANT	-	36.94	36.98	.954
IMMATURE	-	30.98	31.40	.594
<b>FFI</b>		2.44	2.39	.264

There was a lack of significant difference between the means of the two forms for all but three Modes, MARSHMALLOWING, COOPERATIVE and SPONTANEOUS. These results were therefore encouraging in general in terms of equivalence, but pointed up the need to examine the reasons for the discrepant three Modes, in order to plan for the refinement. Firstly it was important to check out Group Profiles to see whether differences between the groups doing the different forms might account for the differences in the two Average Profiles. Examination revealed that this

could have been due to the fact that two of the groups manifesting these particular differences happened to do Form B, and one of these, the Catering Students, was a larger than usual group (N=50). As well as this, Form B was done by fewer respondents (N=125) rather than the (N=177) of Form A, so the effect would have been exaggerated. From further examination it was concluded that in fact the matter of the differences was much more complex than just the effect of the Student Group. In view of this, further equivalence analysis was left to the other four comparison methods, which were part of other analyses as listed above.

## **COEFFICIENT OF VARIATION ANALYSIS**

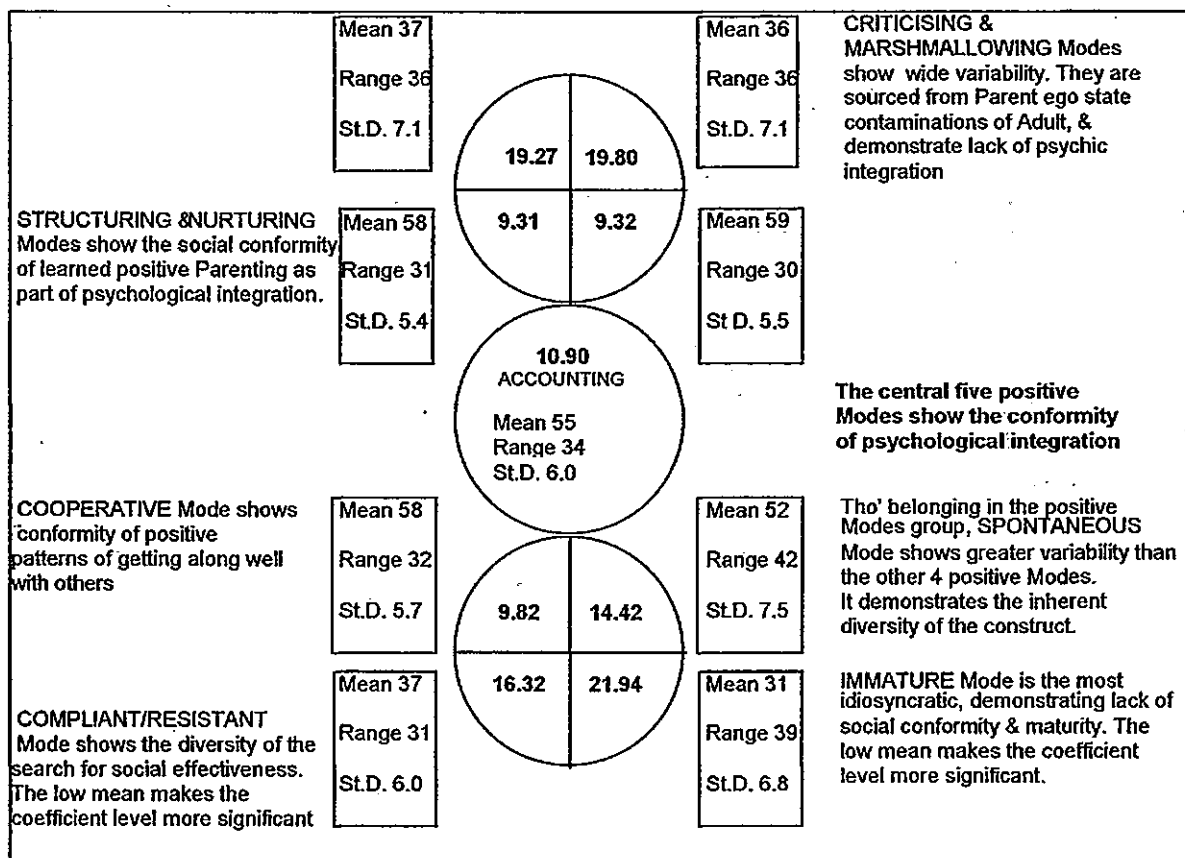
The coefficient of variation expresses the standard deviation as a percentage of the mean. *"The coefficient of variation is given by  $100 \times \text{St Deviation} / \text{mean}$ ."* (Yeomans 1977 p 112). This statistic was applied to the mean scores on the group Profiles in order to gain further insight about the meaning and possible theoretical significance of the relative scores. When considered together with the score ranges it showed the nature of the comparative variabilities of the Modes in terms of their 'consistency/diversity'. In other words a profile giving the coefficients of variability of variation showed how conformingly or idiosyncratically the sample in question had scored on each Mode. In this way, once again, the first two purposes of analysis were fulfilled:

- Theoretical aspects of the model were illuminated.
- Characteristics of the Pilot group in question were illustrated.

Below is an Average Coefficient of Variation Pilot Population Profile (Norm) showing the average coefficient of variation for each Mode for the whole population (N=302). The notes at the sides outline the significant implications of the data in terms of the theoretical constructs of the model.

This Coefficient of Variation of Modes (Pilot Population Norm) was used to compare with other group Average Coefficient of Variation Profiles, e.g. Gender, Age, Professional Responsibility Level, Highest & Lowest Scoring Groups and the nine selected Pilot Groups etc (see Coefficient of Variation Table in Appendix A.3.).

**Figure 4.15. Average Coefficient of Variation of Modes Pilot Population Profile (Norm)**



The most relevant points of this summary are noted here and the implications discussed further in Chapter 5:

- The coefficients consistently showed the same overall Mode pattern as the Pilot Profile, thus reinforcing the evidence to support the Norm.
- The Lowest Scoring Group stood out as an exception, see section above and Appendix A.3.
- The similarity between the cluster of positive Modes, with the anomaly of SPONTANEOUS Mode, was found with slight variations in all the groups.
- The comparative variability of SPONTANEOUS remained constant.
- COMPLIANT/RESISTANT Mode was more variable than COOPERATIVE Mode, showing that there are perhaps more ways to misbehave than to behave!
- IMMATURE Mode consistently showed the greatest variability of all the Modes.
- Modes that had been systematically trained in a particular group showed less variability e.g. the Police Officers and STRUCTURING, and the Psychometric Interpreters and NURTURING.
- The groups not specifically trained in caring as such showed greater diversity in NURTURING Mode, e.g. FE Lecturers, Local Authority Managers, Catering Students.



## Correlation of ACCOUNTING with All Other Modes

Because ACCOUNTING Mode stands alone in the model and is more of an internal activity (intrapsychic rather than interpersonal), it was decided to analyse its correlation to all the other Modes and plot the results by gender on scatter plots. Figure 4.16. below displays the results Mode by Mode in the usual pattern, though without ACCOUNTING Mode in the centre.

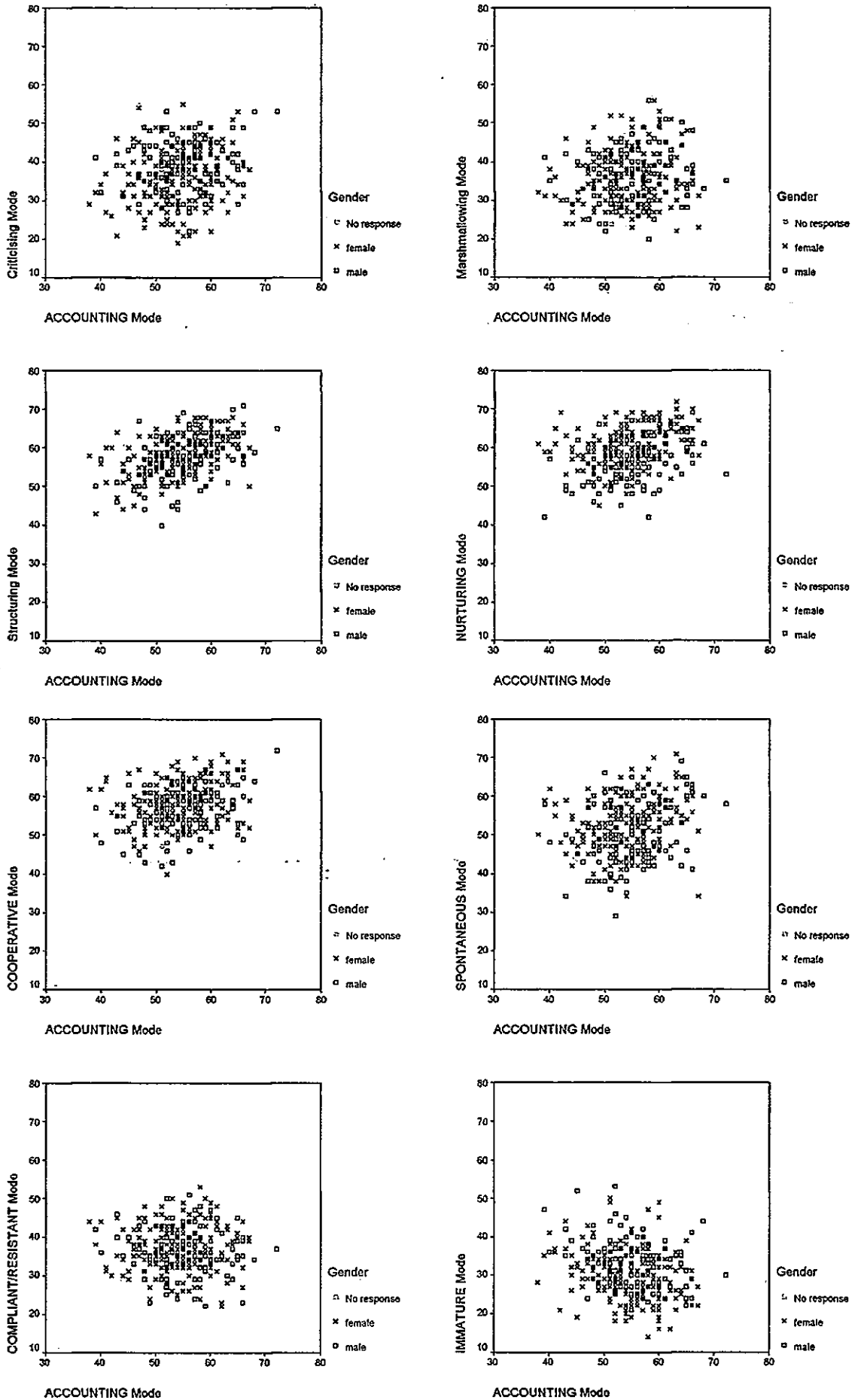
The results endorse those of the Pearson's R analysis on page 118. The clustering of higher overall scores for the positive Modes and lower overall scores for the negative Modes were clearly visible. The positive correlations of ACCOUNTING with the other four positive Modes could be seen by the direction of the oval scatter, with the greater variability of SPONTANEOUS Mode shown by the oval scatter being more diffuse. The gender of outliers could be seen. This provided further information relevant to the Pilot Evaluation Analysis on page 186, and thus in turn to the process of refinement.

The plots for CRITICISING and MARSHMALLOWING showed lack of correlation with ACCOUNTING on the whole; there was not a directional oval of scatter. This illuminated TA theory about ego state sources of negative Parent Modes. In the CRITICISING plot, however, there were a few male respondents who combined high CRITICISING with high ACCOUNTING. Most of the high MARSHMALLOWING scorers seemed to be female and they scored low on ACCOUNTING.

There was little correlation of ACCOUNTING with COMPLIANT/RESISTANT Mode, but for IMMATURE Mode there was slight indication of a reverse oval scatter showing a small negative correlation.

All these points therefore supported the theory underpinning the model. Further evidence of the nature of ACCOUNTING Mode is presented in the Factor Analysis section on page 175.

Figure 4.16. Scatter Plots of Other Modes against ACCOUNTING by Gender



## RELIABILITY ANALYSIS USING CRONBACH'S ALPHA

Cronbach's alpha was used to study the properties of the instrument scales and their constituent items. This produced further information about the internal consistency of the FFI through exploration of the inter-item correlation data.

For each form, data for each Mode was analysed in turn. The threshold for high significance was noted for each form, and the correlations for each pairing were examined. As emphasised in relation to the factor analysis, the design strategies of the instrument meant that the twelve items for each Mode were created to be as diverse as possible while still capturing the essence of the Mode. In some cases the two items testing a single descriptor were designed to be diverse in order to capture two vital aspects of the construct, e.g., for 'blaming', one item is about blaming self and the second is about blaming others.

Taking this matter into account, the Cronbach correlation matrix was useful as an overview of the ways that items correlated in order to identify the items that did not work so well. Several points were checked out:

- Did the pairs of items for descriptors correlate highly, slightly, or even negatively?
- Were there clusters of more highly correlating items?
- What other patterns of correlation appeared?

The meanings and implications of the answers to these questions were investigated and noted in order to facilitate the item refinement process and illuminate understanding of the structure and efficacy of the instrument as a whole. The findings from this analysis frequently endorsed points learned from the evaluation analyses, and produced more evidence of the way that the instrument had worked out in practice.

High, slight, or negative correlation of two items had to be considered in the light of those items' usefulness as part of the set of twelve for testing the Mode. If the two items were meant to be a pair, then a high correlation indicated they were successfully testing the same thing. For instance, the pair for testing 'inconsiderate', "Might you leave your car blocking someone in?" and "Might you stand up while watching the show, blocking the view for those behind?" correlated highly. Sometimes a high correlation was not of an intended pair, but indicated closely associated descriptor concepts, e.g. 'inconsiderate' and 'selfish'. The two items correlating highly here were the car one as above with "Would you find it hard to make the effort to take your sick friend to hospital, even though you're free?"

The few really puzzling examples of high correlation seemed in each case to indicate item fault. For instance, the item for 'zestful', "When people are flagging, would you create a zoom of energy to liven them up?" correlated highly with its pair, and also, appropriately, with an item for 'expressive', "At a time for celebration would you dance for joy?" Not seemingly so apt was the correlation of this zestful item with an item for 'imaginative', "If you didn't know the facts, would you be good at inventing a story to explain the situation?" In this case, the latter item was listed for consideration for possible refinement. Negative correlation of a pair of items indicated that one or both items were flawed. For example, in Form B MARSHMALLOWING, the following two items for 'inconsistent' were negatively correlated: "Would you occasionally insist on the safety rules, but otherwise let them do as they please?" and "Would you sometimes put yourself on a strict diet, but then ignore it by eating sweet things?" It was known from evaluation comments that the first item had caused misunderstandings and needed an adjustment of wording to make sure that it was testing for inconsistency.

The Mode COMPLIANT/RESISTANT had two aspects, as its name suggests. The discrete and different nature of these aspects was indicated by clusters of highly correlating items. In this Mode, items for the descriptors 'defiant' and 'rebellious' correlated highly together and were also negatively correlated with the cluster of highly correlating items for descriptors 'placating' and 'submissive'. This provided useful evidence of the effectiveness of the range of items for this Mode, indicating the convergent and discriminant validity of the scale. This phenomenon occurred only faintly, if at all, in the other Modes, for instance, in MARSHMALLOWING Mode, the descriptors 'overtolerant' and 'self-denying' clustered together somewhat separately from the other four.

An interesting pattern was when the pair of items of a particular descriptor correlated with a range of other items in the Mode. This seemed to indicate that the descriptor concerned had overriding connections with the other descriptors and was therefore a 'key' descriptor. Examples of this were 'dominating' in the Mode CRITICISING, and 'zestful' in the Mode SPONTANEOUS.

On the whole clusterings and correlation patterns were as expected. Unexpected examples gave reason for consideration for refinement. Refinement consideration was due in the case of the two items for 'aware' on both the forms. The items covered awareness about self and others, also about people and things. This divergence was commendable but not at the expense of lack of equivalence between the two forms. The four items needed reorganising as well as some reorienting.

The List of Item Means for each Mode showed whether there were any items that had a higher or lower mean than the rest. This indicated that respondents had scored on this item uncharacteristically, and therefore the item was suspect. Likewise anomalies in the Standard Deviation column gave clues as to oddities in the set of Mode items. For instance there was a case where there were low endorsements for an item for 'overindulgence' and for 'overprotective'. Given the professional expertise of the Pilot sample, this was perhaps to be expected on the whole. Likewise, the very high endorsement for one of the items for 'self-denying' was also to be expected from this sample. The anomalies were therefore explicable and probably had more to do with the sample than the items.

The Item-total Statistics also highlighted problem items, for instance:

- The occurrence of negative figures in the Corrected Item-total Correlation column was noted in just 3 cases out of 216 (i.e. across both forms). Each case was an item known to be problematical and already on the refinement list.
- A higher figure in the Alpha if Item Deleted column identified an item that was lowering the overall reliability of the Mode. Examples confirmed information indicated elsewhere in the Cronbach analysis.

Tables showing details of these statistics are given in Appendix A.4.

It was not expected that the overall reliability coefficient, alpha, would be high, because of the reasons outlined above. In the circumstances they were reasonable, i.e. greater than 0.5, given that each Mode included a diversity of aspects to be tested, and it was a theoretical rather than a statistical coherence that was being sought.

**Table 4.31. Reliability Coefficients for Forms A and B**

<b>Form A Reliability Coefficient</b>	
MODE	ALPHA
CRITICISING	.6125
MARSHMALLOWING	.6454
STRUCTURING	.5885
NURTURING	.5912
ACCOUNTING	.5818
COOPERATIVE	.5961
SPONTANEOUS	.6270
COMPLIANT/RESISTANT	.4077
IMMATURE	.5748

<b>Form B Reliability Coefficient</b>	
MODE	ALPHA
CRITICISING	.7297
MARSHMALLOWING	.6051
STRUCTURING	.6101
NURTURING	.6862
ACCOUNTING	.5075
COOPERATIVE	.6248
SPONTANEOUS	.6523
COMPLIANT/RESISTANT	.4836
IMMATURE	.6628

It is important to note how the figures for COMPLIANT/RESISTANT demonstrate the matter discussed above about the two aspects of the construct, each of which correlated highly, in both cases. It is also worth noting that the coefficient of ACCOUNTING was comparatively low, which

highlights the need for further study about the nature of this Mode, see Chapters 2 and 5 and the Factor Analysis section of this chapter, which follows.

This reliability analysis provided evidence for some aspects of internal consistency of the instrument, was a useful means of further identification of those items and descriptors that should be considered for improvement and also gave further information for comparing the equivalence of the two forms A and B.

## **FACTOR ANALYSIS**

### **Introduction**

The usual purpose of a factor analysis, to seek a smaller number of factors to represent clusters of correlated items (Alt 1990) was not relevant in this instance because the instrument was based on a theoretically derived taxonomy. What was relevant was the exploration of the ways in which the variables (the 108 items) related to each other using the technique of correlation (Child 1970).

The exploration in this study was intended to illuminate characteristics of the Modes, their descriptors and the items designed to test them, in order to assess their suitability and effectiveness. To this end an exploratory factor analysis was conducted using SPSS. Rather than conducting the analysis on the entire sample (N=302) as originally planned, results from each of Forms A (N=177) and B (N=125) were obtained separately. This then gave the opportunity to use the examination of the equivalence of the two forms as an aspect of the preparation for further refinement of the test items.

Doing the two forms separately reduced the number of respondents in each analysis to below the optimum for sampling adequacy suggested by Hair et al (1984). However, as this was a pilot study, the purposes as outlined above were given priority, and the results proved in the event to be adequate for these purposes. The mathematical grounds for the factor solution of 9 (Form B) and 10 (Form A) was the Scree Test. (The extraction of ten for Form A was to allow experimentally for the dual aspect of the Mode COMPLIANT/RESISTANT). Loadings of less than 0.3 were suppressed for both analyses.

Although there was a low ratio of respondents to items in both groups, the Kaiser-Meyer-Olkin (KMO) value of Form A was 0.487, i.e. only just short of the 0.5 that is the recommended level of sampling adequacy, but the KMO value of Form B, done by fewer respondents, was 0.308. It would have been possible to improve the ratio of respondents to items, and therefore the KMO

value, by combining the scores of each descriptor pair of items. This would, however, have negated the main reason for doing the analysis, namely to examine all the items. The Bartlett's Test of Sphericity for both Forms gave a significance better than .001. The total variance explained for both Forms was low, Form A = 36.773% and Form B = 38.31%.

## **Analysis and Interpretation of Results**

In order to maintain coherence within the data reporting it was decided to plot the clusters of component variables onto the same type of profile diagram depicting the functional model of ego states. The intention was to make it easy to identify patterns relevant to the theory of the model and conducive of finding deeper explanation of the results. As stated by Lanyon and Goodstein (1997), "*The major contribution of factor analysis is in understanding the relationships among items and scales of the instrument*" (page 118). Because factor analysis is about mathematically obtained patterns of correlations, it is important to interpret the results using criteria from outside the factorial matrices, in this case the theoretical model itself along with knowledge of human dispositions. Alt (1990) emphasises this point; "*Factor analysis is not a mathematical procedure pure and simple. Rather its success depends also on an understanding of the phenomena being investigated*". He continues, "*Post hoc interpretations of mathematically derived factors cannot guarantee an acceptable result, nor can the mathematics alone*" (page 79).

What became clear when all the variables had been plotted onto the diagrams, was that analysis was needed at a more detailed level than Mode or descriptor. In order to achieve this, the variables were tabulated onto separate sheets, item by item, to create Component Patterns. These Patterns were organised in three layers of detail:

1. Mode Level
  - main Modes represented (positive correlations)
  - subsidiary Modes represented (positive correlations)
  - Modes negatively correlated (if any).
2. Descriptor Level
  - descriptors represented in the above Modes.
3. Item Level
  - items occurring in the component.

Organising the data in this way produced coherent, recognisable human styles of functioning in which the clusters of items related in meaningful ways. The result was a set of dramatically clear, synergistic patterns arising from between and within the nine-Mode model structures. This

demonstrated how respondents in the sample had linked up aspects of the Modes in their scoring. Each pattern included aspects of sets of Modes that combined coherently to illustrate a style of behaving that evidenced a recognisable human relationship theme. A crucial point to note is that the functional Modes are always manifested in combinations rather than in isolation. The component patterns in this analysis gave empirical evidence of a range of such combinations. The Modes need to be identified and recognised separately from a theoretical point of view, but it is the make-up and balance of the combinations that is of behavioural diagnostic interest in using functional analysis of ego states in practice.

A simplistic view might have expected the nine Modes to have emerged as the nine factors, which would have been neat but unrealistic. This was because of an integral part of the instrument design. The twelve items testing each Mode had been chosen to address as wide as possible a spectrum of aspects of each Mode, in order to enhance the richness of the construct. This explained the lack of a simple internal correlation that would have produced the nine Modes as factors.

#### **Component pattern themes**

The human relationship theme for each Pattern emerged from the qualitative analysis of all three Levels, but particularly from the nature of the item clusters in Level 3. Capturing the sense of each cluster resulted in a description of a clearly recognisable pattern of social behaviour that made it possible to name its theme. Each of the Component Patterns was analysed in this way so that finally there was a set of ten for Form A and nine for Form B, see Appendix A.6.

The two sets were created quite separately from each other and not compared at all until fully completed. This was done to achieve as much objectivity of analysis as possible. At the first level of analysis these two sets of components, A and B, seemed not to match up. It was only with the full analysis right down to the third level of item detail and the emergence of themes that they were found to relate to each other after all. Four out of the nine themes for each set were clearly similar in most respects. The other five themes, though strongly related, were manifested with a different 'flavour' on the two Forms. The results of this qualitative analysis are shown in the following table.



**Table 4.32. Factor Analysis Component Themes in Forms A and B**

<b>FORM A COMPONENT NUMBERS</b>	<b>THEMES</b>	<b>FORM B COMPONENT NUMBERS</b>
<b>1</b>	<b><u>Warm Lively Friend</u></b>	<b>2</b>
<b>5</b>	<b><u>Selfish Blamer</u></b>	<b>1</b>
<b>7</b>	<b><u>Responsibility-Taker</u></b> Solid citizen      Winning through	<b>3</b>
<b>10</b>	<b><u>Interferer</u></b> Fuss-pot      Nit-picker	<b>4</b>
<b>8</b>	<b><u>Doormat</u></b> (Rescuer/Victim Classic)	<b>7</b>
<b>9</b>	<b><u>Warmly Welcoming</u></b>	<b>8</b>
<b>2</b>	<b><u>Resourceful</u></b> Leader      Supporter	<b>9</b>
<b>3</b>	<b><u>To Hell With You</u></b> Anti-Authority Risk Taking      Childish Bossy-Boots	<b>5</b>
<b>4</b>	<b><u>Best Mate</u></b> Heart of Gold      Good Ideas	<b>6</b>
<b>6</b>	<b><u>Get on with it Action!</u></b>	

Although in the doing of the Pilot Study it was not feasible to organise exactly matched samples for doing each of the two Forms (see page 107), this result, shown in the table above, still provided some positive indication that the Forms did have considerable equivalence.

The detailed Component Patterns, A1 and B2, for the first of the ten themes, "Warm Lively Friend", follow next as examples of the process. See Appendix A.6 for the two complete sets of Component Patterns.

Table 4.33. Example 1 of the Component Pattern Analysis

## Factor Analysis Form A

Component A1

### Main Modes Represented

<b>STRUCTURING</b>	
helpful	Would you offer to look after the neighbour's house while they are away?
helpful	Would you offer to look after the children as a way to enable someone to attend their training course?
inspiring	Would you talk passionately about your hobby to young people, so they'd want to have a go at it?
<b>NURTURING</b>	
compassionate	Would you stay with the miserable and howling children till they were comforted?
compassionate	Would you allow the person as much time off work as needed after their mother's death?
cherishing	Would you warm the beds ready for visitors?
empathic	Would you guess rightly that the brash new employee is actually very nervous?
<b>COOPERATIVE</b>	
friendly	Would you usually greet others warmly?
friendly	Would you wave back to the people on the passing steamer?
sociable	Would you invite friends and neighbours round for a cup of tea and a chat?
<b>SPONTANEOUS</b>	
imaginative	Would you see fantastic pictures gazing at clouds?
expressive	When your friend appears in the doorway would your face light up with pleasure?
curious	Would you leave the footpath to explore the cave in the side of the hill?

### Subsidiary Modes

<b>MARSH/ MALLOWING</b>	
self-denying	Might you give up your holiday to pay for driving lessons for your teenager?
self-denying	Even though you're tired out and it's time to leave work, might you listen on and on to a chatty colleague?

### Modes NEGATIVELY correlated

<b>CRITICISING</b>	
dominating	Would you push through an agreement to do things the way you think best?

<b>THEME</b>
<b>"Warm Lively Friend"</b>
<b>Description</b>
This is a kindly, warm, open, lively and responsive pattern – doing the utmost for the comfort and convenience of others, enjoying their company and tuning in to their needs, possibly to the extent of not drawing limits for their own sake and becoming somewhat self-sacrificing.

Table 4.34. Example 2 of the Component Pattern Analysis

## Factor Analysis Form B

Component B2

### Main Modes Represented

<b>NURTURING</b>	
cherishing	Would you provide a deliciously tempting lunch for your child who is poorly?
cherishing	Would you buy the book for your friend, remembering how much this friend wanted a copy?
understanding	Would you let the children have their tea on their own so they could giggle and chat freely?
understanding	Would you appreciate other people's differing views on the matter?
encouraging	Would you show appreciation of the beginner's achievements, however small?
encouraging	Would you turn up to watch an event in order to support friends taking part?
empathic	Would you sense that letting the child bring their pet on the visit would help prevent homesickness?
empathic	Would you tune in to how your nervous companions were feeling on the scary walk?
<b>SPONTANEOUS</b>	
expressive	Would you scream with fright on a ghost train?
expressive	At a time for celebration would you dance for joy?
zestful	When people are flagging, would you create a zoom of energy to liven them up?
zestful	Might you sing with delight at the start of a new day?
creative	Would you make a range of attractive presents out of oddments of materials?
creative	Would you gather the leaves and flowers you were given into a beautiful arrangement?

### Subsidiary Modes

<b>STRUCTURING</b>	
firm	Would you insist that the promise to the children is kept?
inspiring	Would you convince people they can do really well and succeed?
authoritative	Would you tell the youngsters to stop chasing about at the roadside 'cos it's dangerous?
<b>MARSH/MALLOWING</b>	
inconsistent	Might you occasionally insist on the safety rules but otherwise let them do as they please?
<b>IMMATURE</b>	
infantile	Would you have a temper tantrum if frustrated beyond endurance?

### Modes NEGATIVELY correlated

<b>CRITICISING</b>	
fault-finding	Would you be inclined to point out the mistakes in the piece of work?

<b>THEME</b> "Warm Lively Friend"
<b>Description</b> This is a lively, sympathetic pattern – very positive towards others, energetic and enabling, gregarious and involved, providing boundaries and encouragement to do well and express feelings.

## Significance of the Factor Analysis

Child (1970) maintained that the principal concern of most factor analysis was the generation and/or testing of some sort of hypothesis. Important questions to address in this instance were:

- In what way are these themes relevant, and how do they relate to the workings of the instrument?
- How do they indicate needs for further design and item refinement including needs for improvement of the equivalence of Forms A and B?
- How do they provide evidence that illuminates the theory on which the instrument is based?
- How do they contribute to the evidence of reliability and/or validity of the instrument?

Careful consideration of the data in these analyses provided subtle and persistent evidence of the internal consistency of the theoretical model on which the instrument was based. As Hair et al (1984) state, "*The 'quality' and meaning of the derived factors reflects the conceptual underpinnings of the variables used in the analysis*" (page 372). Thus the nature of the components in this analysis gave some indication that the instrument had produced relevant and accurate results. The almost uncanny coherence of the make-up of the Patterns resulting in such clear-cut themes was tested in several ways. The following sections relate to the questions above and each offers summary points.

### Needs for further design, item and equivalence refinement

This was done by checking out any items which seemed not to fit at the first two Levels of detail, for instance, Component Portrait B1 "Selfish Blamer". At first glance 'rational' and 'inhibited' would seem not to fit the general picture. However, at Level 3 of items, the coherence was upheld. The 'rational' item read, "Would you work out a system to maximise your chance to win?" The 'inhibited' item read, "Would you sit through the meeting without contributing, although invited to do so?" These items therefore contributed to the theme by showing the possible use of rationality for self-gain, and by demonstrating a possibly different sort of inhibition less like the usual timidity, and more like a passive-aggressive resistance to joining in. This check raised the alert on these two items and they were noted for consideration as to suitability. So this was one of the ways that item refinement was expedited. Items that seemed to match less well in the paired themes from Forms A and B were similarly noted. In addition, attention was paid to the fourteen items from both factor analyses with a loading of less than 0.3 on any factor, six of these on Form A and eight on Form B. Their influence on any theme would be negligible, but in case this matter was significant in terms of item refinement, a list of these fourteen items was added to the refinement data for consideration.

### **Evidence that illuminates the theory**

Evidence was sought by checking out the occurrences of items appearing in more than one component. It turned out that these occurrences were always logical, a) both the themes were similar, e.g. "Warm Lively Friend" and "Best Mate", or b) the themes were different but the item correlated positively on the one and negatively on the other, e.g. "Might you leave your car parked blocking someone in?" was correlated positively with the theme "Selfish Blamer", and negatively with "Warmly Welcoming", or c) there was a contrast of theme, and the item was correlated positively with both, for very particular reasons:

- The item was from SPONTANEOUS Mode (Natural Self and therefore uncensored in nature) and might be used in a variety of social ways regardless of effect. For instance, one item testing 'imaginative' that appeared positively correlated in the themes "Warm Lively Friend" and "To Hell With You" was, "Would you see fantastic pictures when gazing at the clouds?" Another, testing 'zestful', was, "When people are flagging would you create a zoom of energy to liven them up?" This was an illustration and endorsement of the nature of the construct SPONTANEOUS Mode with regard to its insouciance.
- The items accurately reflected one or more theme(s) and appeared in another as a likely social "fault" ('the fault of the virtue'). For instance, the item testing 'overindulgent', which appeared positively correlated in the theme "Best Mate" (common social fault), and negatively correlated in both the themes "Selfish Blamer" and "Warmly Welcoming" (appropriate), was "Would you tend to excuse bad behaviour because the youngster had a difficult home life?" This was an illustration of the often hidden harmfulness of the construct MARSHMALLOWING, the Mode concerned with misguided, inappropriate care that is damaging in its effect.

### **Evidence of reliability/validity of the instrument**

Similarly multi-appearances of ACCOUNTING items were checked out. The results of this investigation illustrated an important point theoretically. ACCOUNTING as a Mode is held to be the assessment of current reality. As such it is neither positive nor negative and is involved in most aspects of mature functioning. Enough ACCOUNTING is necessary for positive self-actualisation (COOPERATIVE and SPONTANEOUS) and positive Parenting (STRUCTURING and NURTURING). Too much ACCOUNTING entails excessive binding up of energy without outcome (obsessiveness) and too little may result in inappropriate behaviours. The following analysis of ACCOUNTING items, shown in Table 4.35. that follows, demonstrates support for this aspect of the model as well as showing further evidence of the consistency and coherence of the make-up of

the Component Patterns. This is an indication of both reliability and validity of the instrument as a tool for putting TA theory into psychometric practice.

**Table 4.35. Analysis of ACCOUNTING Items in Positive and Negative Themes**

Example	Descriptor	First Theme	Second Theme
A1	'aware' 2	A3 To Hell With You POS "If you were performing would you register the shifting moods of the audience?"	A4 Best Mate POS
A2	'evaluative' 2	A7 Responsibility-Taker POS "Would you gather as many facts as possible before deciding which car to buy?"	A10 Interferer POS
A3	'rational' 2	A7 Responsibility-Taker POS "Would you seek an explanation to make sense of the conflicting messages?"	A10 Interferer NEG
A4	'evaluative' 1	A7 Responsibility-Taker POS "Would you make notes about the houses for sale and compare them to help you choose?"	A10 Interferer POS
B1	'alert' 1	B1 Selfish Blamer POS "Would you spot a safe gap in the traffic so you could cross the road?"	B9 Resourceful POS
B2	'rational' 1	B1 Selfish Blamer POS "Would you work out a system to maximise your chance to win?"	B5 To Hell With You POS
B3	'aware' 1	B1 Selfish Blamer NEG "Would you realise that some of the people present seem unhappy with the proposed arrangement?"	B6 Best Mate POS
B4	'evaluative' 1	B4 Interferer POS "Would you compare the results with those of previous years in order to come to a conclusion?"	B6 Best Mate POS
B5	'precise' 1	B3 Responsibility-Taker POS "Would you ensure the measurements for the wallpaper are accurate?"	B8 Warmly Welcoming POS
B6	'alert' 2	B3 Responsibility-Taker POS "Would you pay full attention while the rules are explained?"	B8 Warmly Welcoming POS

**Key:** POS = positive correlation with this theme. NEG = negative correlation with this theme

Points emerging from this analysis of ACCOUNTING items:

1. An ACCOUNTING item appearing in a positive and a negative theme – item is irrelevant to social motivation, see examples A1, A2, A4, B1, B4.
2. An ACCOUNTING item appearing in a positive and a negative theme – item correlates positively with the positive theme and negatively with the negative theme, see examples A3, B3.
3. An ACCOUNTING item appearing in two negative themes – item reflects how a desire to win can be antisocial through egocentricity or selfishness, see example B2.
4. An ACCOUNTING item appearing in two positive themes – item reflects how a desire to be 'with-it' or do well can be used in a socially effective way, see examples B5 & 6.



The Pilot population with its built-in positive social bias would be expected to associate ACCOUNTING more with positive Modes than with negative ones. This was so, as shown by the correlational evidence reported in the section on coefficients of variation and illustrated with a set of scatter plots on page 171. The factor analysis therefore gave expanded evidence of the full nature of ACCOUNTING Mode. It demonstrated through the make-up of the components the logic that ACCOUNTING, in accordance with its theoretical construct, seems to be value-free and could be associated with either positive or negative Modes.

In general the Component Patterns with their themes emerged from the data as coherent and 'normal' combinations of Modes, which again may be because the pilot population on the whole was reasonably healthy and psychologically well adjusted. It might be that a psychiatric population, for instance, would produce bizarre and incoherent patterns and themes, with pathological combinations and balances of Modes.

## **EXPLORATORY TEST-RETEST STUDIES**

### **Introduction**

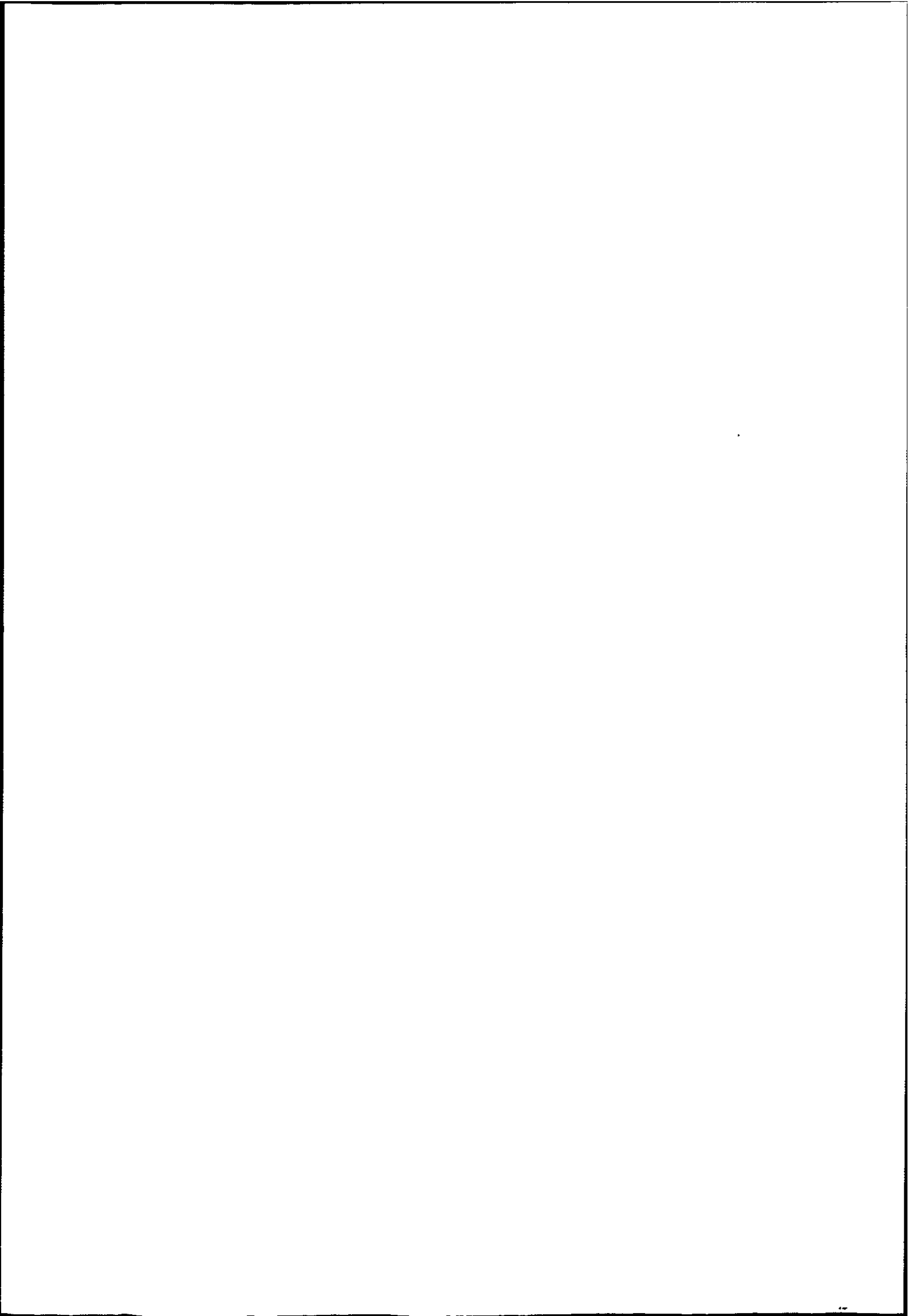
This set of studies was organised to take advantage of the availability of some of the Pilot Groups for completing the questionnaire a second time; the samples were therefore opportunistic and less than ideal. The important matter to bear in mind was that, because the FFI was designed to provoke self-reflection, awareness, change and growth in individuals undertaking the exercise, customary reliability evidence was not being sought in this case. As with the Adlerian instrument, Basis-A (Kern, Wheeler & Curlette 1993), there would be some expectation of change in the second set of results. The main focus of interest was therefore ascertaining what might influence such changes, were there any.

The treatment factors were:

- The doing of two equivalent Forms, A and B.
- The time gap between the two test takings.
- The receiving of feedback after the first taking.

Because of the constraints of both sampling and procedures, the results could only give tentative indications and possible pointers. The task was to gain evidence to support appropriate future design and planning for the development of the instrument.





In view of this, it was decided not to conduct a statistical analysis (t-test), but to explore the results quantitatively and qualitatively in order to ascertain the effects of the treatment variables.

The following table outlines the organisation of the treatment factors.

**Table 4.36. Test-Retest Studies Organisation of Treatment Factors**

Study	Form	Time gap	Feedback	General Result
1 N=8	B then A	None	None	A slightly higher
2 N=9	A then B	Two months	Feedback	B much higher
3 N=9	A then B	Two months	None	B slightly lower
4 N=9	A then A	Two months	Feedback	A much higher
5 N=14	B then B	None	None	Cancelled
6 N=10	B then A	Two months	Feedback	Cancelled

Patterns of scoring were examined for all the individuals involved in Studies 1-4. Summaries were made using the overall ratio score, the FFI, along with both Parent and Child ratios and element ratios, see Appendix A.5.1-4, in order to assess whether scores had 'improved' or not. The next table showed the overall pattern of these results.

**Table 4.37. Pattern of Results of Test-Retest Studies**

Study	FFI			Parent Ratio			Child Ratio		
	UP	SAME	DOWN	UP	SAME	DOWN	UP	SAME	DOWN
1	4	2	2	6	0	2	0	3	5
2	6	1	2	5	2	2	7	2	0
3	2	1	6	4	4	1	2	0	7
4	8	1	0	7	2	0	7	1	1

Factors to take into account when assessing the results for groups and individuals were:

- practice/familiarisation effect
- boredom/fatigue effect
- context for taking/retaking the tests
- other events happening during the gap.

### Questions That Were Posed

1. What evidence was there for equivalence of Forms A and B?

The first relevant evidence was that for Study 1, in which Form A was done second on the same occasion, i.e. no gap or feedback. The results were very similar, with some aspects higher and a few lower, see the table above. Factors of practice and/or fatigue could have had an effect, possibly the latter as it was the Child ratios that fell.

In Study 3, in which Form B was done second with a gap but no feedback, B scores were also mixed, but slightly lower on the whole. In Study 2, however, Form B scores were considerably



higher, though this was after feedback and a gap. So Form A produced very slightly higher scores in the two more similar studies, and lower scores in the dissimilar one.

Anomalies and discrepancies of scoring on the two forms were investigated, where possible, through consultation with the administrators. This revealed, in some cases, reasons quite separate from the test context for unexpected results. For instance one respondent had experienced an extremely traumatic change of job situation during the gap between tests that provided a rationale for the difference in scores. In terms of indication for necessary refinement, unexplained discrepancies were noted for future consideration.

2. Does having a gap between doing the two tests affect scoring level?

There was no firm evidence to show on this matter because of the missing data.

3. Does having feedback after doing the first test affect scoring level?

The relevant studies here were numbers 2, 3, and 4. In studies 2 and 4 there was feedback and a gap before the retake. The difference was that in Study 2, Form A was done followed by Form B, and in Study 4 Form A was repeated. In both these studies the retest scores were considerably higher, whereas for Study 3, with no feedback, the retest scores were actually slightly lower. This gave some indication that feedback might be important in raising the test scores.

In conclusion, Forms A and B clearly have some equivalence, which could very likely be increased by particular item refinements. It would seem that feedback, and maybe the effect of a gap of time, is likely to raise scoring levels, whichever way round the Forms are used.

## **ANALYSIS OF THE PILOT EVALUATIONS**

### **Introduction**

The pilot process of trialling the instrument with a sample of 302 respondents entailed a wide range of involvement from the participants, both those who completed the instrument and those that administered it and assisted with the feedback exercises. All were requested to complete detailed evaluation forms. Almost everyone filled in the forms, some adding many comments and suggestions. Thus they provided:

- some facts about the process of questionnaire completion
- their subjective responses to the Introduction, the Instructions and the Questionnaire itself
- their reflective evaluations on the process of doing the instrument
- their objective considerations (in some cases) of the nature and efficacy of the questionnaire design.

These empirical data gave vital information about the range of ways that people understood and responded to all parts of the exercise. They threw light on some of the dilemmas of the Questionnaire construction, from actual choices of mode descriptors to the fine detail of item refinement. In terms of the entire project, the analysis of these data was of great significance for the goal of optimal development of the Functional Fluency Index.

The data have had to be interpreted and used in balance with the inductive process of instrument construction from a preconceived theoretical base. What respondents liked or disliked did not therefore necessarily dictate the changes to be made, but it did indicate where serious consideration was in order.

Apart from the quantitative summaries of the various tick-box responses on the evaluation forms, in order to assess satisfactions and complaints in general, the analysis of the evaluations was of a qualitative nature. Comments were sorted into themes and topics to extract useful ideas for worthwhile instrument improvement and item refinement. This systematic immersion in the data was a way to capture and discover meanings relevant to the enquiry. As Neuman (1994) explains, *"Analysis proceeds by extracting themes or generalisations from evidence, and organising data to present a coherent, consistent picture"* (page 317).

The degree of necessity for change of a particular aspect of the instrument was largely pointed up by the quantity of instances of negative comment by respondents. However, it was also necessary to compare the positive with the negative comments to gain a fuller picture. For instance, even though several people objected to the set of examples given as part of the introduction and instructions, implying that they were unnecessary, it was a fact that an overwhelming proportion of the comments about the instructions cited the actual examples as being especially useful and helpful. Conclusions to be drawn were therefore that the examples should stay in but in future test administrators' information would include a suggestion to alert suitable test-takers that doing the examples was not essential if they felt they didn't need them.

### **Quantitative Analyses**

Sample sizes were different for the two forms used in the Pilot Study:

- Form A evaluation sample was 189
- Form B evaluation sample was 116
- Total number of evaluations was 305

### Time needed for instrument completion

The time taken by the total sample to complete the Questionnaire ranged between 5 and 50 minutes. Thirty-nine people (13%) took 15 minutes or less and twenty-two people (7%) took more than 30 minutes. The average time taken was 23 minutes. People doing Form A were more inclined to complete it faster than those doing Form B.

**Table 4.38. Completion Times for Forms A & B: Summary of Central Tendency Statistics**

Form A		Form B	
17% in under 15 minutes		7% in under 15 minutes	
7% in more than 30 minutes		10% in more than 30 minutes	
Mean 20 minutes		Mean 26 minutes	
Median 20 minutes		Median 23	
Mode 15 minutes		Mode 20	

The difference in the central tendency statistics above could be explained by the fact that Cohort B included a group of FE catering students (N=50), some of whom may have found the instrument more demanding in terms of reading level than the rest of the respondents who were adults. This matter was echoed in other parts of the evaluation below, and is discussed on page 194.

### Basic responses to the Introduction and Instructions

There was little difference between the two forms, and most people were very positive about these aspects of doing the instrument.

**Table 4.39. Summary of Responses to the Introduction & Instructions**

Introduction		Instructions	
Fine	70%	Fine	75%
Adequate	25%	Adequate	25%
Unclear	-	Unhelpful	-
Other	OK 2 minutes Long winded Boring	Other	Patronising OK x 2 A little confusing Not necessary for me personally

### Basic responses to the Questionnaire

Even though there were slight differences between the two forms, again, most respondents were very positive. They were all invited to circle their choice of response from:

Fine.....OK.....Boring.....Hard to do.....Other (please say).....

**Table 4.40. Summary of Responses to the Questionnaire**

Form A N=189	Form B N=116
At least 92% rated the Questionnaire <b>Fine</b> or <b>OK</b> .	At least 87% rated the Questionnaire <b>Fine</b> or <b>OK</b> .
A further 2% rated it "quite fun", "thought provoking", "interesting" and "good"	A further 2% rated it "interesting", "thought provoking", "interesting questions".
3% considered it <b>Boring</b> or <b>Hard to Do</b> .	8% considered it <b>Boring</b> or <b>Hard to Do</b>
Two people put "annoying" or "sometimes confusing"	One person put "unclear" and the rest put nothing

This table shows there was slightly more satisfaction expressed with Form A than Form B. It is possible that the student group who did form B accounted for this.

## **Qualitative Analyses**

### **Comments on the Introduction**

There were four sentence completion options:

1. I liked.....2. I didn't like.....3. I wish it had included.....4. Other.....

Appreciations came from the first option, and clustered into the same broad themes for both forms.

Generalised positive comments (N=8). For example:

"The fact there was an introduction". "Fascinating". "Easy to do".

Appreciation of the Style and Presentation (N=17). For example:

"Easy to follow, clear format, well thought out and logical, covering all relevant areas".

"Gentle and unthreatening, friendly and informal".

"Concise, jargon-free, plain language".

Inherent Enabling Messages (N=11). For example:

"Permission to be quite honest, something for me in doing it".

"Reassurance". "No right answers". "Understanding". "Everyone has bad and good days".

"Encouragement to relax and be myself".

"Emphasis on it being for the respondent, rather than a test to tell others something".

Clarity, Explanation, Examples (N=44) (there was overlap here with "Instructions")

"Explanations made it clear what to do". "They told you what you needed to know". "They said not to deliberate".

"The examples were specific, helpful, simple, easy, visual, clear, unambiguous and quick to follow".

"Precision", "comprehensiveness" and "simplicity" were generally appreciated.

These comments gave evidence that the design, style and format of the introduction were found to be effective and enabling of their aim which was to promote a positive, open and confident attitude to doing the instrument.

As well as these affirming comments, respondents contributed their views using the other three options, saying what they didn't like and/or wished had been included.

### **Dislikes about the Introduction (N=9)**

Mostly these were to do with length and complexity, for example:

"Should have been straight to the point". "Too many big words".

Other points included:

"Although it said it wasn't about right or wrong answers, 'Functional Fluency' sounds like something you are good or bad at". "Waiting to get started".

### **Wishes and Suggestions for the Introduction (N=11)**

- On front page – allow for people to have more than one job title.
- Wish it had included a free gift, pictures, variations, information on Functional Fluency.

- Wish it had included the clarification that even if a particular item didn't apply directly to your situation, you should think how likely/unlikely would be your action if you were so placed (N=2).
- Wish it had included what it is for and all about, to make it more interesting.

(N.B. Inadequate administration in the last two cases).

### **Other Comments on the Introduction (N=3)**

"I skimmed them because of lack of time". "Read out, then didn't use again". "Didn't read it; I felt I knew what to do already".

There was evidence here of the benefits of good administration of the instrument. Most of the negative comments were from pilot groups where the administration had been inadequate in some way, for instance, rushed, lacking in detailed information, short on support and clarification. The implications were extremely valuable to note and take into consideration for the training of future administrators and also for the design of their written guidance. The practical suggestions were taken into account for the improvement of the design, so long as they reinforced the aims as outlined above, and were actually possible.

### **Comments on the Instructions**

The sentence completion options were:

1. They helped me because.....
2. I wish they had.....
3. Other.....

#### **Option 1**

The aim of this way of asking for positive comments was to elicit specific points of helpfulness experienced, in order to maximise ideas for design improvement. Again, several themes emerged:

People found the explanations clear (N=41):

Many (N=25) added linked adjectives:

"Comprehensive" "Reassuring" "Concise" "Precise" "Explicit" "Short" "Fun" "Friendly".

Helpfulness of the examples.

This theme was expressed in two main ways:

General Enabling (N=22) for instance:

- "Easy to understand, I could scan them & they gave me confidence and thinking time".
- "They helped me to focus quite quickly because I knew what I was doing".
- "They welcomed authenticity & encouraged personal intuitive responses".
- "They said not to think too hard & left me to make up my own mind".

Reference to Specific Directions (N=34) in particular, for instance they:

- "Outlined the procedure well, explained what to do & helped me to do it right" (N=13).
- "Used a visual model to show how to tackle the task step by step, with a chance to practice and graduated examples".
- "Gave an idea of how long one should ponder on each question".



Some dislikes were also expressed, for example:

- "The examples that you had to complete" (N.B. there was no compulsion, written or verbal).
- "The 'a b c' suggestion interfered with the spontaneity of my answer, more like an 'ought'".
- "The elaborate instructions and rather obvious examples – patronising".
- "Long-windedness, large amount of instructions and information".

There seem to be two elements here, on the one hand irritation or struggle with the quantity and complexity of the print, and on the other a sense of intrusion or imposition from the instructions for people who felt they didn't need the help.

The learning to be taken from this particular evidence is twofold:

- a) The instrument would need to be adjusted in various ways for different groups of respondents, e.g. adolescents or students.
- b) Sensitive, appropriate administration is crucially important and should be focussed to meet individual needs as much as possible.

### **Option 2**

The sentence completion "I wish the instructions had...." produced a variety of comments N=15.

Some echoed previous themes about desiring brevity and simplicity, though conversely one asked for more examples! Others were specific practical suggestions such as:

- "Have bolder type and more spacing to make them appear different from the rest".
- "Mention it is OK to use other methods of arriving at a conclusion".
- "Have a box for "Don't know"; human nature being what it is". (Which was why there wasn't one included in the design!)

A wish for "preparation for dealing with the 'double negatives' in some items" was a pointer towards an important item refinement issue about the use of subtle wordings, which could sound like double negatives.

### **Option 3**

"Other....." elicited comments including:

- "The instructions were a little bit 'noddy', but better to be clear than unclear".
- "I looked at the examples to see what was wanted, a tick, a cross or a line".
- "I would think that most people do understand how to complete these questionnaires and query whether the instructions were really necessary".

These comments conveyed a sense that the instructions and examples were overdone. They were considered along with the positive comments of approval to glean ideas for realistic improvement.

## Comments on the Questionnaire

This section invited respondents to suggest improvements, or make any other comments. Both these options elicited positive and appreciative comments, which referred to the actual test items and also to the process of answering them:

People found the questionnaire:

- "Intriguing" "Interesting" "Thought-provoking" (N=11).
- "Enjoyable" "Easy" "Fun to do" (N=13).
- "Unusual" "Like the variety and diversity" (N=10).
- "Humorous" (N=8).

In terms of the practicalities of actually doing the questionnaire, individuals expressed liking for:

- The tick-boxes, the user-friendly "big tick".
- Multiple choice, method of questioning, and consistency.
- The actual questions, especially the quick, easy ones.
- The options of 'slightly likely' and 'slightly unlikely'.

There were various revealing observations that gave evidence of people's engagement with the exercise, which in turn was likely to have increased the validity of their answers. For instance:

- "I became aware of how differently I'd behave at work and in the family".
- "Knowing TA, I kept thinking what each question might mean".
- "I sensed some clear themes, e.g. attitude to risk, helping others and potential to 'stick to guns'".
- "I found it interesting to think about the ideas for myself".
- "I am assuming that the wording is very carefully constructed, as a single word within a sentence radically affected the overall meaning".

Secondly were the dislikes and the suggestions for improvement. The comments on each of the two forms have been kept separate and were considered both for ongoing item refinement, and for improvement of the equivalence of the two forms.

### Form A

The main issues of difficulty in answering the questionnaire were:

1. Specificity of situation in items that seemed irrelevant or that didn't apply:
  - Child care situations (N=11).
  - Situations involving a partner (N=3).
  - Situations like bed-warming, whistling, watching TV.

2. Vague, obscure or ambiguous items (N=12).
3. Items where there would be more than one answer depending on the context, which was not specified (N=6).
4. Items where the wording seemed to produce a 'double negative', e.g. "Would you avoid...?"

These seemed to cause responses ranging from amusement through irritation to major objection, and usually the points made were relevant and useful for one or both the research tasks as above.

Further significant single observations were as follows:

- "My own personal experience will affect my answer". (True, no problem).
- "In the item wording, the use of the definite article denotes an existing state of affairs" (Yes).
- "I had to keep reminding myself to think how likely in general my action would be". (This is part of the subtlety of the instrument that the scale of likelihood allows for the expression of conditionality. This point needs to be put across in both the written and verbal introductions).
- "It was fairly easy to see which was the "right/best" answer". (This is the classic social desirability issue, impossible to avoid entirely).

In general some annoyance was expressed about pressure of time, not being able to qualify answers, some ambiguities and not understanding what the term 'lateral thinking' meant.

A major point was made in two of the pilot groups by both their administrators and one or two of the respondents about the meanings of some items being culturally mediated, in particular those assuming heterosexual, middle-class family life. This matter was taken very seriously with regard to the further item refinement.

### **Form B**

Overall there were far fewer comments, partly because there were fewer Form B evaluations. The main issues were the same as for Form A, namely: specific situations not relevant to the respondent, vagueness, context dependence and the 'double negative' effect. However there were only two comments about children and families, so the equivalence of the two forms may need adjusting in this respect. There was some evidence of a cultural assumption that people do not have anything to do with children unless they are parents or professionals in the field (Evaluation comments from Sites 8, 9, 11 & 21). Some other specific suggestions for improvement were made that mostly echoed what had already been noted. One helpful, practical suggestion was that the wide range of questions should be flagged up in the introduction.

Most of the annoyances expressed came from the Form B student group:

"Stupid questions" "Too long, too many 'likelies'" "Too hypothetical" "Questions should have been in categories" "I finished up with too many children!"

They pleaded for a shorter version that should be clearer, easier, more interesting and better worded. They wanted a livelier presentation and suggested:

"Add graphics", "Have colour", "Increase visual variety of font", "Put in a picture of the author" and "Have less intense and close together print".

All these points merit consideration for possible future development of the instrument and especially, perhaps, for the adolescent and student age groups, as already noted above.

It is worth considering that there may have been a contextual influence on the feelings of this group about doing the instrument. It is possible that a pressured college context and less than fully enabling and effective administration affected the students' motivation and energy. They also knew that they would get no feedback.

Because of this and the tone of some of their evaluations as shown above, the reliability of their data was checked by running extra analyses on the SPSS programme, before going ahead and including the group in the pilot sample. No significant unreliability was found.

### **General Comments**

Some general questionnaire comments were about the actual test design and construction, and though of interest, were not to be entertained as viable options. They showed that the respondents concerned were not aware of how the scales and scoring worked and what the implications of their suggestions would be:

- "Have more spaces to put the ticks in".
- "Have fewer choices on the scale".
- "Have a middle choice".
- "Have an extended range of choices, e.g. 'not sure' or 'depends' and space to say why".
- "Have an alternative to likely, e.g. like/dislike, and use 'rather' instead of 'slightly'".

Finally, gathered from the range of specific suggestions from both forms was a variety of useful points to be considered in the item refinement:

- Have fewer 'obvious' questions.
- Choose an alternative to 'whistling'.
- Have more humorous items.
- Fewer questions on the topics of children and partners.

- Reflect a wider social and cultural diversity.
- Avoid assumptions about sexuality, marriage and children.

### The Double Paradox Matrix

There were several aspects to the issue of specificity versus vagueness of items. The ways in which respondents commented on their experiences of answering the questionnaire item can be summarised in the following matrix. Both vagueness and specificity were found to be both helpful and unhelpful. This varied between different items and between different respondents. An example of appropriate vagueness contributing to the efficacy of the item was Q 94 Form B for 'encouraging': "Would you turn up to watch an event to support friends taking part?"

Figure 4.17. Double Paradox Matrix

Matrix to Illustrate Issues of Vagueness versus Specificity of Test Items.			
	HELPFULNESS		
VAGUENESS	People enjoy the freedom to respond from their own unique experience.	Some people find the questions easy to give definite answers to.	SPECIFICITY
	People may be uncertain how to understand the question.	Some people find that the situations don't apply to them.	
	UNHELPFULNESS		

Respondents' comments on this issue reflected all four of the factors. During the item refinement process the matrix was used to illuminate the pros and cons of how vague or specific to make particular test items in order to make them as effective as possible.

All these issues and suggestions raised by the Pilot respondents were taken into account with respect to the improvement of design of the whole Questionnaire documentation. The specialised material focussing on the efficacy of the items themselves was added to the other sources of data gathered for use in item refinement.

## Analysis of Administrators' Evaluations

### Quantitative Analyses

The average total time needed to administer the instrument was 35 minutes, with a range of 30 to 45 minutes. Most administrators allowed about 10 minutes for the introductions and 20 to 30 minutes for doing the questionnaire. The exception was the student group, who needed an extra 10 minutes to cope with the reading complexity.

The basic evaluation responses invited and the results are presented in the tables below:

**Table 4.41. Quantitative Analysis of Administrators' Evaluations (N=16)**

Pilot Administration Notes			
Fine	Adequate	Unclear	Other
15	1	0	0

Did Respondents Understand the Instructions?			
Yes	Most	Some	A few
13	2	0	0

Any problems With the Questionnaire?			
No	1 or 2	A lot	Most of the Time
11	4	0	0

These results indicated that on the whole the administration had been achieved smoothly and easily. Further comments were invited under each of the above headings using the sentence completion device as follows:

How did you find the Pilot Administration Notes?

1.They would have been better if.....2.I liked.....3.I didn't like.....4.Other.....

Did you find the respondents understood their instructions OK?

1.They had trouble with.....2.It would have helped if.....3.Other.....

Were there any problems doing the actual questionnaire?

1.What seemed to cause difficulty was/were.....2.I think an improvement would be (all suggestions gratefully received, please carry on overleaf if necessary).....3.Other.....

#### **Qualitative Analysis of the Administrators' Comments**

The range of comments and suggestions under these headings were sorted according to five themes for use in the instrument improvement process. Those that referred to particular questionnaire items were added to the main collection of item refinement data.

#### Design of the Questionnaire booklet

Personal Details page:

- Allow for more than one job title.
- Put "Please wait for the OK from the administrator before turning over" at the bottom.
- Put Site and I/D coding on the front cover.

#### Additional General Information Needed

- Purpose and use of the research project (to go into the Administrators' introduction).
- What Transactional Analysis is (to go onto the Personal Details page).
- The way in which this questionnaire is unusual (to go into the written Introduction).

### Questionnaire design

- Allow for more cultural and social diversity.
- Reduce the number of questions related to children and heterosexual family life.
- Reduce the 'middle-classness' e.g. ambiguity, phrasing, grammar. Eliminate reference to 'my/your' child(ren).

### Design of the Administrators' Notes

- Have two sheets, one for setting the scene and general information and permissions, and the other for actual instructions.
- Write instructions in bullet point style for ease of checking.

### Improvement of or Additions to the Administrators' Instructions

- Say whether the Administrator should read out the instructions or not.
- Explain why it is important to do every question.
- Check the literacy levels – more time may be needed.
- Mention the possible variations in time – maybe allow some to go when finished.
- Explain about the register more clearly.
- Write in help for understanding the choices "slightly likely" and "slightly unlikely", making a link with the method in the Examples.
- Write in help for enabling respondents to generalise their responses (i.e. how the scale of likelihood does in itself express conditionality).
- Mention the OKness of thinking of both home and work contexts.
- Give reassurance about expressing views on family life, as everyone has some sort of growing-up experiences of their own to refer to.

### **Concluding comment**

The information gained from the analysis of this range of evaluations was collated and used as part of the framework for improving the whole instrument, its design, administration and most importantly the actual test items. It added a vital human dimension that complemented the information gained from the statistical analyses outlined in the previous sections.

Particular findings from the whole range of analyses of the Pilot Study data are discussed in Chapter 5.

# CHAPTER 5

## DISCUSSION OF RESULTS

### Introduction

The results of the Pilot Study were remarkably consistent. They endorsed, from a range of perspectives, certain key evidence. Most of the Pilot aims, see page 104, were fulfilled and the main purpose of the data analysis, see page 113, was achieved. The achievement of the first two data analysis objectives, to illuminate the operationalisation of the theory behind the model and to present evidence of how the instrument portrays respondents' characteristics, will be discussed in this chapter. The third objective concerning assessment of instrumental effectiveness and refinement planning will be addressed in the final chapter.

The most important basic facts established were that the Pilot scores were not random and that the Average Pilot Profile could be suitably relied on as a set of norms for that population. Comparisons of the elaborated results for differences of age, gender, high and low scoring, etc enabled exceptions, anomalies and inconsistencies to be analysed to produce the details of evidence necessary to fulfil the data analysis objectives as above.

The decision to maintain coherence of pattern of presentation throughout the analyses to match the scoring and feedback materials proved invaluable. The use of the diagrammatic profile format enabled easy comparison of the different sets of results. The consistent order of the data analysis process gave a coherent framework for tracking threads of meaning. It was these threads of meaning that both provided the theoretical illumination and gave evidence for the psychometric potential of the instrument. This was the dual focus referred to at the beginning of the data analysis chapter. Although these two aspects need to be differentiated, in fact they are inseparable and so will be dealt with together in the following discussion.

The Functional Fluency model, see Chapter 2, on which the Functional Fluency Index is based, embraces layers of theoretical ideas at different levels of conceptual differentiation. The framework of the data analysis process echoed these layers of ideas in the same way as the scoring process outlined at the end of Chapter 3, but in reverse order.

The scoring process started with the 108 item scores then came the 54 descriptor scores. These were added to give the nine Mode scores for the profile pattern. From this pattern, element, positive and negative totals were calculated, and also the Central Balance. The FFI ratio was the final score. The table below lays out this pattern in the data analysis order.



# CHAPTER 3 DISCUSSION OF RESULTS

Introduction

The purpose of this chapter is to discuss the results of the study and to compare them with the findings of other researchers. The results are presented in a series of tables and figures, and the discussion is organized into several sections. The first section discusses the overall findings of the study, and the following sections discuss the results of the individual experiments. The final section discusses the implications of the findings and suggests directions for future research.

The results of the study show that there is a significant difference between the two groups. The first group performed significantly better than the second group on all measures. This finding is consistent with the hypothesis that the first group would perform better. The results also show that there is a significant interaction between the two variables. This suggests that the effect of the first variable depends on the level of the second variable.

The findings of this study are consistent with those of other researchers. For example, Smith et al. (1998) found that the first group performed better than the second group on a similar task. This suggests that the results of this study are not unique to the specific task or conditions used in the study.

The implications of the findings are that the first group is more effective than the second group. This suggests that the first group should be used in situations where performance is important. The findings also suggest that the second variable should be controlled when using the first variable.

Future research should investigate the reasons for the differences between the two groups. It would be interesting to see if the results hold for other tasks and conditions. It would also be interesting to see if the results hold for other groups of people.

**Table 5.1. Order of the Data Analysis Process**

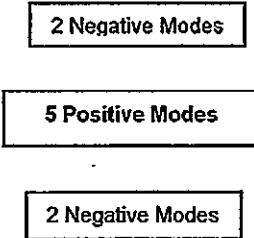
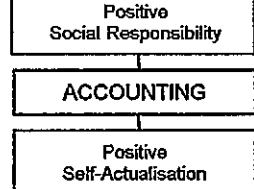
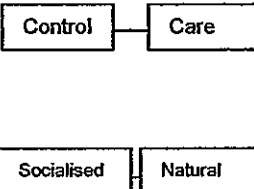
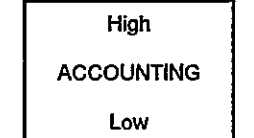
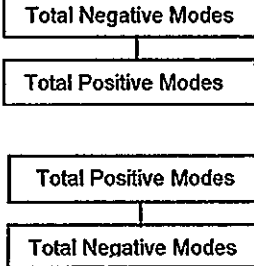
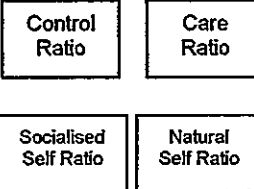

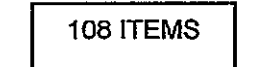
Operational Aspect	Diagrammatic Version	FFI Scoring	Theoretical Ideas
<p>The ratio between the sum of the five positive Mode scores and the sum of the four negative Mode scores.</p>		<p>The FFI as a total score</p>	<p>The idea of the wholeness of a person being more than the sum of the parts, and to do with how the parts relate to each other.</p>
<p>Comparison of the sum of STRUCTURING and NURTURING scores with ACCOUNTING score and with the sum of COOPERATIVE and SPONTANEOUS scores. (Quantitative analysis)</p>		<p>Central Balance between the positive aspect of Social Responsibility, Accounting and the positive aspect of Self-actualisation.</p>	<p>The idea of energy balance <u>between</u> categories of functioning.</p>
<p>Comparison of the sum of CRITICISING and STRUCTURING scores with the sum of MARSHMALLOWING and NURTURING scores. Also of COOPERATIVE and COMPLIANT/RESISTANT with SPONTANEOUS and IMMATURE. (Quantitative analysis)</p>		<p>Balances between the Control and Care elements and the Socialised and Natural elements.</p>	<p>The idea of energy balance between the elements <u>within</u> the categories.</p>
<p>The level of the ACCOUNTING score compared with the other four positive Mode scores. (Quantitative analysis)</p>		<p>The ACCOUNTING score before weighting.</p>	<p>The potential significance of an excess or deficit of Reality Assessment in relation to the other Modes</p>
<p>The ratio between the sum of CRITICISING and MARSHMALLOWING scores and the sum of STRUCTURING and NURTURING scores. Also of COOPERATIVE and SPONTANEOUS with COMPLIANT/RESISTANT and IMMATURE. (Qualitative analysis)</p>		<p>Balances between the positive and negative manifestations of the Social Responsibility and the Self-Actualisation categories.</p>	<p>The idea of balance between negative and positive ways of manifesting the categories of functioning.</p>
<p>The ratios between CRITICISING &amp; STRUCTURING, MARSHMALLOWING &amp; NURTURING, COOPERATIVE &amp; COMPLIANT/RESISTANT and SPONTANEOUS &amp; IMMATURE Modes. (Qualitative analysis)</p>		<p>Balances between positive and negative manifestations of Control, Care, Socialised and Natural elements.</p>	<p>The idea of balance of effectiveness of Mode usage.</p>
<p>54 DESCRIPTORS SCORES</p>		<p>Patterns and correlations of Mode descriptors <u>within</u> and between Modes.</p>	<p>Patterns of behavioural tendencies and habits.</p>
<p>108 ITEMS SCORES</p>		<p>Patterns and correlations of particular descriptor items.</p>	<p>Nuances of personal motivation, inhibition &amp; style.</p>

TABLE I

TABLE I

TABLE I

TABLE I

TABLE I

TABLE I

TABLE I

TABLE I

TABLE I

TABLE I

TABLE I

TABLE I

TABLE I

TABLE I

TABLE I

TABLE I

TABLE I

TABLE I

TABLE I

TABLE I

TABLE I

TABLE I

TABLE I

TABLE I

TABLE I

TABLE I

TABLE I

TABLE I

## Scoring Interpretation

This was a two-way process in which knowledge of the TA theory imbued the scores with potential meaning and the nature of the scores generated further theoretical insights. The following discussion includes illustration of this process.

### The FFI ratio

There were two particular types of scoring style to note with respect to the overall FFI score:

- The scores were all elevated – named 'exuberant scoring'.
- The scores were all depressed – named 'restrained scoring'.

This was an important reason for making the FFI a ratio score, so that exuberant scorers did not seem to score higher and restrained scorers lower. However, as a scoring 'result', a person's style as evidenced in this way might be significant and provide useful data for raising self-awareness through feedback. Further trials of the instrument would clarify potential meanings of this phenomenon. Lanyon & Goodstein (1997) point out that such response styles or distortions may have major effects on results of personality-type tests, and must be taken into account both in terms of interpretation of scores and in terms of refinement and development of the instrument. If the distorted responses seem irrelevant to the focus of the test, this may be a sign of what Lanyon & Goodstein call "error variance" (p 198) and offending items causing the difficulty should be eliminated or adjusted. An example of this was one of the items for 'precise' that stimulated respondents to score it inappropriately low because it sounded like obsessiveness. If the responses, though distorted, are related to the test focus, e.g. some of those for items testing the descriptor 'blaming', they should be noted and explored further with the respondent during feedback for the meanings they may be indicating. The up-to-date view on this matter, summarised by these authors, is that careful test design is the best prevention of problems of response-style and response-set. Also needed are awareness of their possibility, skill in detecting them and strategies of feedback to deal with occurrences.

The FFI ratio is a generalisation, an overall indication of the balance between all the positive Modes and all the negative Modes. As such it is logical to assume that it gives an indication of effectiveness of functioning in terms of the three categories of Social Responsibility, Reality Assessment and Self-Actualisation. The Pilot Study results gave some evidence to support this claim. A further claim, to be tested in the future, is that high FFI scorers are likely to carry authority well, cope realistically with the world and be well adjusted as people. In TA terminology they would be likely to be 'winners'. *"A winner is defined as a person who fulfils his contract with the world and*

with himself" (Berne in Steiner 1976). Another relevant viewpoint is provided by psychometricians Robert and Joyce Hogan and Geoff Trickey (1999), who write,

*"People always live in groups, and every human group has a status hierarchy; this suggests that the two big problems in life concern getting along with other people while at the same time trying to achieve some status among them – we refer to this as getting along and getting ahead. These tasks are biologically mandated, because being accepted and having status promote individual fitness" (page 6).*

The FFI, therefore, could be said to be about how someone is 'getting along' and 'getting ahead', or to what extent are they 'winners', given that winners accomplish that which they set out to do. One might expect that exceptionally high scorers would be unusual people who would stand out in their social and professional contexts. Likewise exceptionally low scorers might be said to be not 'getting along and getting ahead' very well. The analysis of results from the highest and lowest scorers in the Pilot Study, see Chapter 4, page 152, revealed much evidence to support these ideas. The data also indicated, however, that low scoring was associated with youth as well as with social difficulties, also that FFI scores increased with age, see Chapter 4, Section 2. It is therefore possible that low scoring could mean either that someone is not functioning well yet (natural immaturity of youth, and/or lack of learning), or that someone is functioning ineffectively in various ways (socialisation and learning have been counter productive). In order to make sense of the overall FFI, deeper exploration of the scoring profile is necessary.

### **The Central Balance**

Consideration of the Central Balance is the next stage. The term implies the evenness of scores between Total Positive Parent (TPP), ACCOUNTING (ACC) and Total Positive Child (TPC). Its meaning turned out to be more complex than was first thought. The initial assumption that a higher FFI score would be correlated with a more even Balance, and that the meanings of the two concepts were similar, proved incorrect. The Central Balance may or may not be particularly significant or relevant in individual cases. On the one hand the most even individual Central Balance belonged to the fourth highest scorer, who was a snow and ice climber, raising speculation as to whether this even balance might be a metaphor for level-headedness and actual physical and psychological balance. On the other hand the Pilot group manifesting the most even average Central Balance a) did not produce a high average FFI or other ratio scores, and b) produced various negative Mode scoring features, see page 147. What did emerge as important was how the three scores in the Balance actually related to each other. For instance, high TPP in relation to ACC and TPC seemed to correlate consistently with high involvement in socially responsible activity. The following evidence supported this observation:

- This feature was demonstrated by the majority of the Pilot sample who were engaged in the helping professions.
- This feature was exaggerated in those groups where care and control of others was the prime focus of the work, e.g. the police and educational psychologists, see Chapter 4 Section 3.
- This feature was much reduced in those groups not having care and control of others as the major professional focus, e.g. local authority managers and catering students, see Chapter 4 Section 3.
- This feature did not appear in some cases where, in contrast to the group average, the individuals' Central Balance was even and evidence from real life was that they were unusually self-focussed as well as performing well professionally, e.g. the ice-climbing police officer cited above and a mature educational psychology student with an exceptionally strong urge to achieve highly on her own account.
- This feature was reversed in some individual cases in which the TPP was less in relation to their TPC score. Two contrasting examples were a young male teacher reported to be struggling with the job and who also scored very low on the FFI, and a female therapist managing her own business who was known to be a successful artist in her own right and who also scored very high on the FFI.

In terms of theoretical meaning and accurate portrayal of personal characteristics, it would seem that the relation of the TPP and TPC scores indicates the balance of energy engaged by a person on account of others and/or on account of self.

#### **Relative ACCOUNTING scores**

The nature of the relationship of the ACCOUNTING score with the TPP and TPC seemed to have some particular implications. When the ACCOUNTING score was similar to one or both of the other two, as in the Norm, no special meaning was discerned, but when ACCOUNTING was either much higher or much lower than the other two this seemed to indicate problems. For instance, two contrasting cases showed an ACCOUNTING score much lower than the TPP and TPC and otherwise high scoring patterns. Both intelligent women in their fifties had led interesting, successful and eventful lives, professionally and personally. The low ACCOUNTING scores were initially puzzling in both cases. However, further discussion and reflection revealed aspects of these women's lives that gave dramatic illustration of the consequences of lack of ACCOUNTING (i.e. failing to assess current reality adequately):

- In one case the woman had a pattern of letting herself become too deeply involved in inappropriate intimate relationships and then feeling too scared to set herself free. This pattern had caused her serious difficulties.
- In the other case the woman had experienced various accidents and traumatic experiences that led members of her family to call her reckless. This she strongly denied and felt vindicated by her discovery that she had not scored high on the descriptor 'reckless' on the test. In making sense of the meaning of the low ACCOUNTING score, she gradually realised that her habitual lack of taking stock of situations and assessing the consequences of various options led her to make impetuous, ill thought-out decisions that did sometimes have disastrous outcomes.

In both cases the new awareness was a stimulus to developing more reflection and reasoning in their respective decision making and showed how the instrument could be used as an effective tool for personal development.

Another case gave evidence of accurate testing of the ACCOUNTING construct and evidence from a different perspective of how too elevated a score also could indicate a problem. A woman in her thirties working very successfully in business had an ACCOUNTING score very much higher than her TPP and TPC. At first assuming such a high score must be 'a good thing', she was puzzled at the mismatch of this score with the reality of her difficulties about any sort of decision-making. Exploring the make-up of her ACCOUNTING score provided evidence of how she avoided coming to conclusions by continuously assessing and reassessing aspects of a situation. She demonstrated a quality of obsessiveness rather than logicity in her thinking, which made decisiveness hard for her. Other scoring features that seemed possibly to be relevant in this matter were a high score for 'inconsistent' and a low score for 'authoritative'. This respondent expressed interest in using the insights thus derived to help her overcome the difficulties.

#### **Parent and Child ratios**

The ratios of Total Positive Parent over Total Negative Parent (Parent Ratio) and Total Positive Child over Total Negative Child (Child Ratio), as well as providing the data for the Central Balance, also gave an indication of the effectiveness of those two separate categories of functioning. The Pilot Norm showed both these ratios to be just over one and a half, i.e. one and a half times more positive than negative. Great difference between the Parent and Child Ratios on a profile could denote issues or problems resulting from the imbalance, e.g. overworking at the expense of health and recreation. Pilot data showed that anomalies of ratio balance scoring could

occur when a person was in the middle of or recovering from a stressful event, for instance the birth of a child or a major job change, e.g. Site 20 Case 05.

### **Quantitative and qualitative balances between elements**

'Horizontal' balances between the elements of Parent or Child categories were not expressed as a ratio because of their inherent difference of concept. It was simply the relative score level that was noted. The Parent category elements will be discussed first, followed by the Child category elements.

The theoretical model maintains that the Parent elements of Control and Care are in principle equally important when someone is in charge of others, and that this may vary appropriately in relation to particular contexts, roles and needs. In terms of the FFI, therefore, the Total Control and Total Care scores would be expected to be very similar unless there were an existential reason for them to be otherwise. It was hypothesised that, were there no such reason, uneven scores might indicate that the person was putting extra or less energy into one or the other element as an expression of their own propensities and habits in this area. The implication would be that this might be counter productive, i.e. someone might be ill-advisedly over/under-controlling or over/under-caring.

The results from the Pilot Study bore this out through the evidence from the Average Group Profiles from the selection of nine groups, see Chapter 4 page 140. The groups showing Total Control as substantially higher than Total Care were the Police Officers and the Behaviour Support Teachers. The reverse was shown by the Psychiatric Personnel who put more energy into caring. This was appropriate in view of the professional contexts. The essence of this aspect of the scoring is about quantity, about how much energy is going into Control or Care. Although as a measure it is blunt and can only give indications that need to be explored further, those indications may themselves be extremely relevant and important.

The quality of each of these two elements of functioning, Control and Care, is captured by the two element ratios. Thus the Control ratio is STRUCTURING divided by CRITICISING, and the Care ratio is NURTURING divided by MARSHMALLOWING. The relative efficacy of the two elemental energy outputs can be assessed by comparing these two ratios. The Pilot Norm showed Care and Control elements the same, and Care and Control ratios almost the same (Care was slightly higher). To follow through on the above examples of group profiles, the Police Officers who did more controlling than caring, did them qualitatively in a way that was both even and almost the same as the Norm. The Behaviour Support Teachers, who also did more controlling than caring,



had a much less positive Control ratio than Care ratio, i.e. their controlling was less effective than their caring. Likewise both aspects of scoring were of use to illuminate the nature of the Psychiatric Personnel group's Parent functioning. Though this group did more caring, see above, its Care ratio was distinctly lower and therefore was less effective than average. Its lower amount of controlling, however, had a higher than average Control ratio, indicating higher than average effectiveness.

In use, therefore, examination and comparison of both these aspects of scoring of the Parental category of functioning are vital. Also essential is to consider both these aspects in relation to the reality and demands of the respondent's life contexts.

The elements of the Self-actualisation category of functioning (Child) are about positive or negative Socialised Child (SocC) and positive and negative Natural Child (Nat C), i.e. socialisation and individuality respectively. In the same way as for the Parent elements, the scores for the Total Socialised Child and Total Natural Child were quantitative. The Pilot Norm evidenced an interesting imbalance in this matter. Total SocC was much higher than Total NatC, indicating that this population on average put more energy into social effort than into individualistic endeavour.

The ratios for each element, SocC ratio and NatC ratio, were about the respective qualitative features of the Child elements. They showed more evenness and also similarity to the Parent ratios, see Pilot Profile Norm on page 112. In fact the NatC ratio was the most positive of the four in spite of SPONTANEOUS Mode having a lower mean than the other positive Modes. This was because the mean for IMMATURE Mode was relatively so low. Theoretically the generalised interpretation of the Pilot Norm for the Self-actualisation category of functioning is that the population evidenced high maturity, low individualism, positive social competence with some tendencies to have hang-ups. These assumptions are reasonable given the pervading professional culture of the 'helping professions' in the relevant decades. This would have been likely to attract this 'type' of person and then reinforce these characteristics with training and experience (Walker 2001). It could also be argued that these patterns are culturally induced through child rearing and schooling practices (Weare 2000), and are possibly more widespread than just the Pilot population. Further research with different populations will clarify this matter.

#### **Evidence from exceptions**

The various Pilot data mostly endorsed the Pilot Profile patterns as above. Exceptions threw more light on the subject:

- While the Female Group pattern followed the Norm, the Male Group showed a NatC ratio that was lower, i.e. less personal maturity.

- The Age groups' NatC ratios rose steadily with age, i.e. maturity increased with age. Their SocC ratios rose only slightly and unevenly with age. The quantitative elemental balance remained heavily weighted towards SocC for all age groups.
- The levels of the Professional Responsibility groups' ratios improved with increased levels of responsibility and the elemental balance remained as for the age groups.
- The Highest Scorers Group showed the same quantitative imbalance as the Norm, but had much higher element ratios, while the Lowest Scorers Group had slightly less quantitative imbalance but had ratios of only just over 1.
- The selection of the nine Pilot Groups all echoed the Pilot Norm with slight variations. Only the lowest scoring group (Catering Students) had a NatC ratio less than their SocC ratio to match that of the U20 Age Group, see the relevant analysis in Chapter 4.

These data supported expectations based on common sense assumptions about ordinary progression and development with increased age, life experience, wisdom and skill. The SocC ratios did not rise with age to match the NatC ratios presumably because of the ongoing professional demand to emphasise Parenting Modes in this population, see Table No. 4.11. FFI and Ratio Scores according to Age on page 118.

Two exceptional trends associated with age were that COOPERATIVE Mode started high with the Under 20 Group, dipped and rose again. Maybe this illustrated the concerns of the youngest still with peer group issues, then the separating off socially of the Thirties Age Group into families followed by increasingly mature interdependence of the oldest respondents. Rational explanation is hard to come by, however, for the uneven curve of NURTURING Mode, see the Age Comparison Plots page 117. This is a key Mode for this population, and this aberration is a puzzle.

#### **The comparison of Mode scores and their meanings**

Parent and Child categories showed various axes of variability that were significant theoretically. Statistically, the axis of variability for the four Modes of the Parent category is horizontal. This was extremely significant in terms of theory because it gave evidence of the crucial differentiation between positive Parenting (STRUCTURING and NURTURING), and negative Parenting (CRITICISING and MARSHMALLOWING), at the same time emphasising the connections between the two elements of Parenting, Control and Care. The issue expressed is therefore about 'positive' and 'negative' and the question to ask is "How beneficially is the Parenting being done?" Evidence of this axis of variability was shown in all the statistical analyses,

and the pairing of the two sets of Modes as above can be seen in all the tables and figures presented in Chapter 4.

For the Child Modes there is more complexity connected with axes of variability. There were several issues:

- The overall nature of psychological growth and development from infancy.
- The efficacy of socialisation and learning.
- The blossoming of individuality and initiative.

There were two questions to match the two axes of variability evidenced in the data:

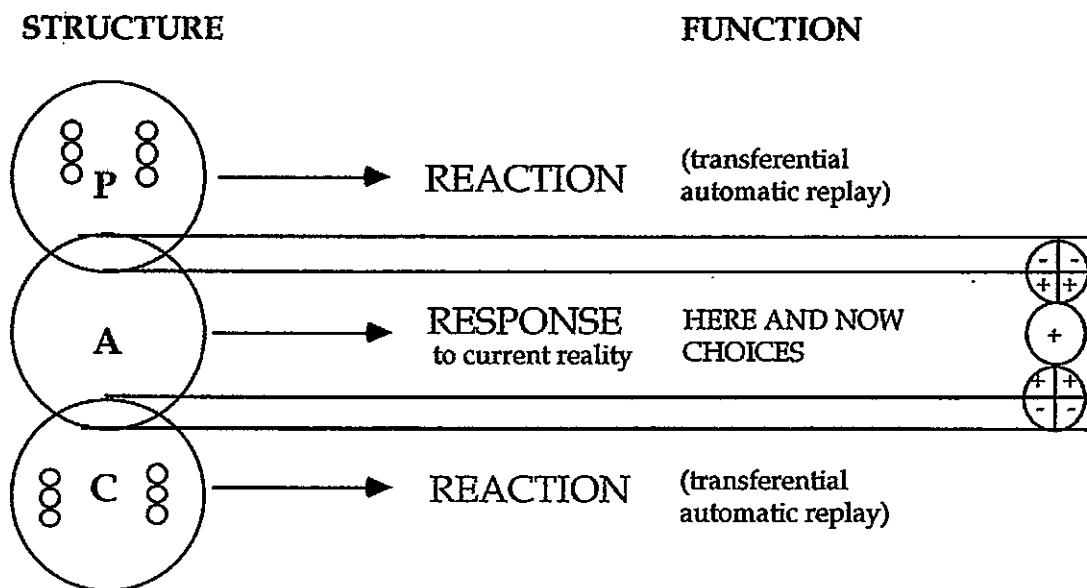
- "How effectively is socialisation progressing?" (Vertical axis).
- "How effectively is personal growth progressing?" (Horizontal axis).

These issues and questions are of course inseparable in practice, and in terms of the model, the developmental dynamic could be said to fan out from IMMATURE Mode towards both COOPERATIVE and SPONTANEOUS Modes, avoiding COMPLIANT/RESISTANT as much as possible! Patterns and meanings of Child Modes are therefore more complex than those of Parent Modes. Although the Norm data showed a positive/negative axis as for Parent, with COOPERATIVE and SPONTANEOUS having higher scores and IMMATURE and COMPLIANT/RESISTANT having lower scores, the meanings of those scores depended on the developmental dynamic as above, thus requiring consideration of all four Child Mode scores in relation to each other.

The theoretical significance of all these axes lies in the TA rationale for the structural sources of the behavioural manifestations of ego states, as described and explained in Temple (1999) and shown in Figure No.5.1. which follows.

The key point is that the two negative Parent Modes and the two negative Child Modes are sourced in intrapsychic structures known as contaminations. They are "*...a part of the content of the Child or Parent ego states that the individual mistakes for Adult content*". (Stewart & Joines 1987). Contaminations have more to do with the past than the present. Parent contaminations are said to be externally sourced from a legacy of introjections from past influential people, and Child contaminations are said to be internally sourced from past unintegrated experiences. This helps to make sense of the negative Modes' potential inappropriateness in the here-and-now.

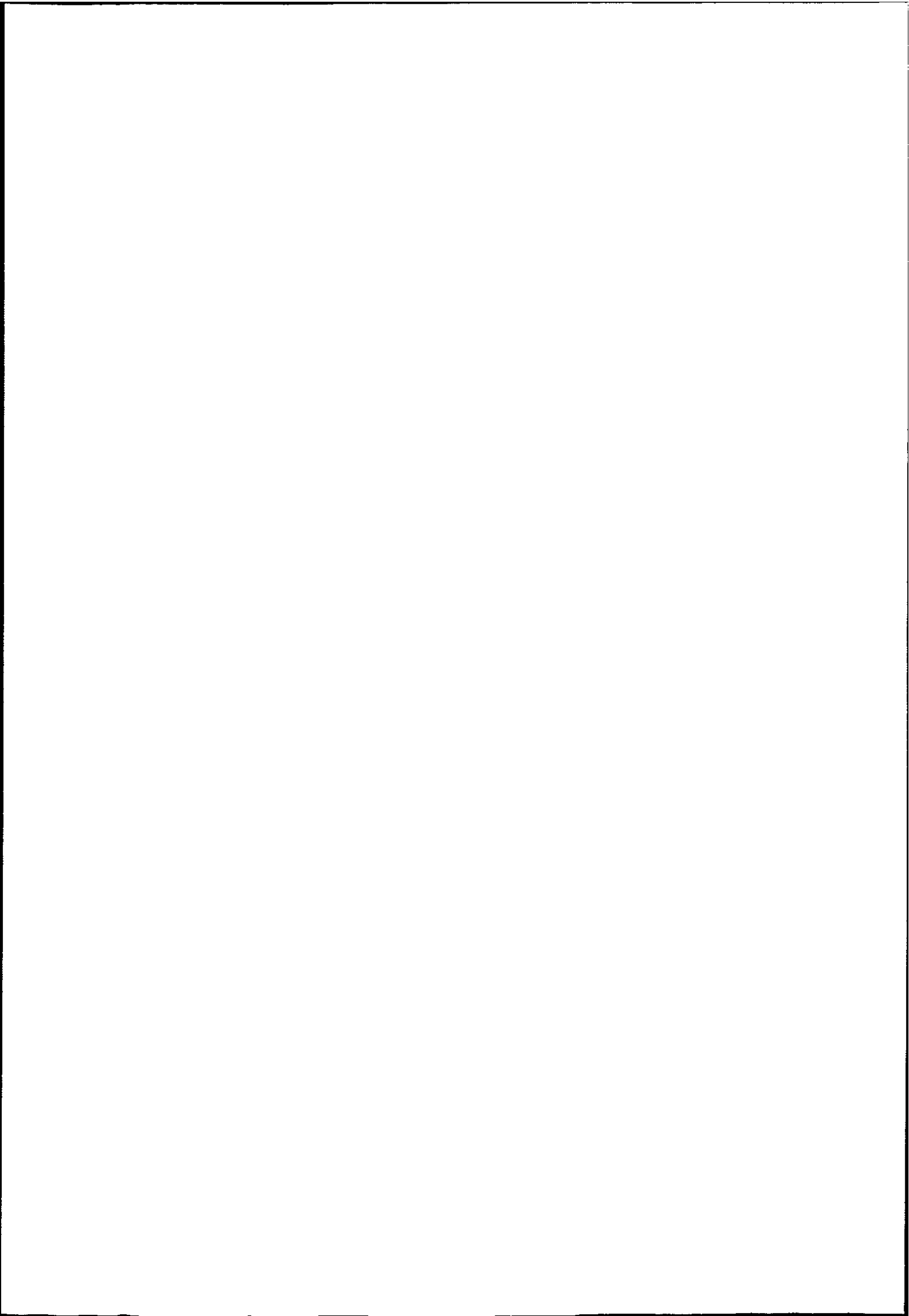
**Figure 5.1. React and Respond Diagram**



In contrast, the five positive Modes are behavioural evidence of a person's own integration of past and present influences, teachings and learnings in terms of the three categories of functioning. In a way reminiscent of the point made by Hogan, Hogan and Trickey (1999), see the quote on page 201, these three categories also have a 'biological mandate'. Human beings are social animals, developing psychologically through and within the relationships they experience (Thomas, & Chess 1999). They grow up and develop over a long period of time during which their parents or other tribal adults take responsibility for them. This means a) that it is natural for adult humans to take responsibility for self and for others as well and that this is learned through the growing up processes of each person for good or ill, and b) that the self matures and learns how to relate to others within the given network of relationships. The facility for assessing current reality is the outcome of each person's unique learning influenced by temperament, talent, opportunity, example, expectation and encouragement. It is a crucial part of the person's survival mechanism. The Pilot data provided a wealth of evidence to support the theoretical ideas outlined above. The axes are obvious on all the group profiles, with the subtle variations provided by the different groupings illustrating the basic Mode meanings.

**Further details of Mode variabilities**

Subtle Mode variability differences were illustrated clearly on the Whole Pilot Mode Frequency Histograms, see page 117 in the first part of the Data Analysis chapter. The position of the central group of all five positive Modes shows they belong together, with the extreme variability of SPONTANEOUS Mode showing its uniqueness within this positive Mode grouping. The position



of the four negative Modes shows another sort of belonging, in two pairs. It is the variability difference of the negative Parent pair that emphasises the horizontal Parent axis and endorses the theoretical explanation of their nature. Likewise it is the variability difference of the two Natural Child Modes that demonstrates the vertical Child axis concerning the issue of socialisation. The difference between the positive and negative Child Modes, shown by their axis position, demonstrates the horizontal axis concerning the issue of effectiveness of personal growth, as explained above.

The analysis of the correlations of ACCOUNTING Mode with the other Modes by gender, see Chapter 4, Analysis of Coefficient of Variation section, page 168, gave a slightly different perspective on these same points. The central positive cluster appears again on the scatter plots, page 171, along with indication of SPONTANEOUS' greater variability, while the negative Parent Modes show up as a pair and the Child Modes show their two pairings. Further theory is endorsed by the evidence of lack of correlation of ACCOUNTING with COMPLIANT/RESISTANT, and slight negative correlation with IMMATURE. This would match with the theoretical assumption that these two Modes manifest out-of-date attitudes and beliefs, whereas ACCOUNTING is about here-and-now reality testing. In addition, the wider scatter of IMMATURE could be said to be illustrating its idiosyncratic, untutored nature as a theoretical construct.

#### **Issues relating to ACCOUNTING Mode**

ACCOUNTING stands out uniquely in the model. It is both one of the nine constructs and a functional category because it has not been divided up into elements nor into aspects of elements. In the scoring, therefore, it is being assessed quantitatively only. Respondents ACCOUNT either more or less. Qualitative assessment depends on investigation of scoring on the six descriptors. Its uniqueness is also because it is concerned with internal affective and cognitive activity. ACCOUNTING comprises both collection of data and its organisation, reminiscent of Piagetian concepts of assimilation and accommodation. As pointed out in the Factor Analysis section 8 of Chapter 4, ACCOUNTING is operationalised in principle in value-free behaviour. In general the data from the Pilot Study, however, showed strong correlations between ACCOUNTING and the other positive Modes, presumably because of this population's association and involvement with socially responsible activity. On the other hand, the Factor Analysis results revealed a potential link of ACCOUNTING with anti-social or hostile activity. It is important that this matter is researched further through studies with populations exhibiting social and psychological difficulties such as prison or prison hospital inmates.

There seem to be two issues to consider in the interpretation of ACCOUNTING scores, again concerned with quantity and quality:

a) On the whole there was a tendency for high ACCOUNTING to be associated with higher profile scores, and vice versa. A noteworthy exception was the Catering Students Group with the lowest Pilot Group FFI score, whose average ACCOUNTING score was actually the same as that of the two highest Pilot Group scores. The hypothesis is that developmental stage was the factor depressing the range of ratios for this group. The results from the youngest Age Group endorsed this point. A contrast was shown by the Lowest Scorers Group of 10 respondents who had low individual and average group ACCOUNTING scores. Seven of these ten in fact came from the large Catering Students Group, indicating that these seven, as well as being young, were also less effective socially, matching the other three older group members for whom there were cross-data indicators of personal and professional difficulties.

The level of ACCOUNTING usually matched with the level of the other positive Modes. When ACCOUNTING was much higher or lower for an individual or a group, it seemed to be a sign of a problem or issue to be examined further in the scoring. Another point to note with regard to ACCOUNTING scoring is the possibility that training may be able to raise scores, for example as in the Police Officer Group score, see Chapter 4 section 3. This raises the educational issue of the value of encouraging and teaching children personal and social awareness and thinking skills, as is promoted by the citizenship aspect of the National Curriculum (QCA 1999). A question remains with regards causality. Does ACCOUNTING actually aid STRUCTURING and NURTURING, COOPERATIVE and SPONTANEOUS Modes, or is it simply correlated?

The analysis to extract Mode frequencies for the 11 highest ACCOUNTING scorers in the Pilot sample and the 12 lowest shed more light on the nature of ACCOUNTING scores. This analysis provided results as expected except for one anomaly that stood out. Instead of the high scorers group having lower scores for the negative Parent Modes and the low scorers group having higher ones relatively, it was the other way around. This did not fit with the expected Pilot pattern as discussed so far. Theoretically drawing on the evidence from the Factor Analysis cited above, this result could have been an indication that those 11 high ACCOUNTING scorers, contrary to the Pilot Norm, actually associated ACCOUNTING with negative Parenting. Investigation of the individuals' scores, however, showed this not to be the case. This anomaly leads into discussion of the second issue to do with interpretation of ACCOUNTING scores.

b) The second, more qualitative, issue is to do with the correlations of ACCOUNTING with other Modes, and the potential light that they might throw on the motivations and propensities of the respondent. If ACCOUNTING is in principle emotionally neutral, morally value-free and therefore equally usable in conjunction with positive or negative Modes, then interpretation of ACCOUNTING scores should take several matters into account, namely:

- how ACCOUNTING appears in the Central Balance
- how ACCOUNTING score compares with the other positive Modes
- how ACCOUNTING score compares with the negative Modes.

In particular, low ACCOUNTING and high ACCOUNTING associated with otherwise generally higher Mode scores may have very different meanings. The former could denote lack of skill and habit in assessing reality, which could lead to some idiosyncratic problems, and the latter could denote intentional and 'effective' use of the negative Modes, i.e. conscious negativity, as was possible in the anomaly described above.

Eric Berne sometimes used the metaphor of a computer for this ACCOUNTING facility of the Adult ego state, "*..a self-programming probability computer designed to control the effectors in dealing with the external environment*" (Berne 1961 p 76). This fits with the notion of a Winner mentioned earlier in this chapter, someone who achieves their intended goal, which could be a bank robbery or a charity event. Given these issues, there needs to be a good reason for referring to ACCOUNTING as a 'positive' Mode when it is in fact value-free. An important point is that enough ACCOUNTING is necessary for effective Social Responsibility and Self-Actualisation. Cultural and educational reinforcement of the association of ACCOUNTING with the positive Modes would therefore seem to be desirable, along with awareness of possible 'misuse' and strategies to avoid this.

### **Correlations between Modes**

The cross correlation matrix using Pearson's R reinforced the overall pattern of the other analyses from yet another perspective, see the summary chart on page 119 in the first part of Chapter 4 and the full matrix in Appendix A.2. In addition it gave further support to the theoretical explanations of the Modes, the nature of the concept of Integrating Adult and the make-up of the Functional Fluency model, (Erskine 1988, Clarkson & Gilbert 1988, Temple 1999). The central group of positive Modes showed a pattern of positive correlation with each other and non-correlation (or slight negative correlation) with the four negative Modes, thus endorsing the convergent and divergent construct validity of the model, see below. IMMATURE Mode can be



1. The purpose of this document is to provide a comprehensive overview of the current state of the project and to outline the key objectives and milestones for the next phase of development.

2. The project has been initiated in response to the growing demand for a secure and scalable solution that can effectively manage sensitive data and ensure compliance with industry regulations.

3. The primary objectives of the project are to:

- Enhance the security of the existing system by implementing advanced encryption and access control mechanisms.
- Improve the system's performance and scalability to support a larger user base and increased data volume.
- Ensure full compliance with all applicable regulatory requirements, including data privacy and retention policies.

4. The project is currently in the planning and design phase, with a focus on defining the system architecture and identifying the necessary resources and dependencies.

5. Key milestones for the project include the completion of the initial requirements gathering, the finalization of the system design, and the commencement of development and testing activities.

6. The project team is composed of experienced professionals with expertise in software development, security, and project management, ensuring a high level of expertise and accountability.

7. Regular communication and reporting will be maintained throughout the project to provide stakeholders with timely updates on progress, challenges, and risks.

8. The project budget is well-defined and includes all necessary resources, including personnel, hardware, and software licenses, to ensure the project is completed within the allocated timeframe.

9. The project is expected to be completed by the end of the fiscal year, with a final review and deployment of the new system.

10. The project is a high-priority initiative and will receive the necessary support and resources to ensure its successful completion.

Confidential - Security Information

11. The project is a high-priority initiative and will receive the necessary support and resources to ensure its successful completion.

12. The project is expected to be completed by the end of the fiscal year, with a final review and deployment of the new system.

13. The project budget is well-defined and includes all necessary resources, including personnel, hardware, and software licenses, to ensure the project is completed within the allocated timeframe.

14. Regular communication and reporting will be maintained throughout the project to provide stakeholders with timely updates on progress, challenges, and risks.

15. The project team is composed of experienced professionals with expertise in software development, security, and project management, ensuring a high level of expertise and accountability.

16. The primary objectives of the project are to:

- Enhance the security of the existing system by implementing advanced encryption and access control mechanisms.
- Improve the system's performance and scalability to support a larger user base and increased data volume.
- Ensure full compliance with all applicable regulatory requirements, including data privacy and retention policies.

17. The project has been initiated in response to the growing demand for a secure and scalable solution that can effectively manage sensitive data and ensure compliance with industry regulations.

18. The purpose of this document is to provide a comprehensive overview of the current state of the project and to outline the key objectives and milestones for the next phase of development.

seen to have a pattern of positive correlation with the other three negative Modes and also a pattern of negative correlation with ACCOUNTING, STRUCTURING and NURTURING. It shows almost no correlation pattern with COOPERATIVE and SPONTANEOUS, the figures showing a very slight negative link. This again would make sense theoretically as outlined above.

#### **Qualitative aspects of Mode scores**

The Coefficient of Variation Analysis, see Chapter 4, page 168, demonstrated aspects of the nature of the differences between the Modes that both illuminated the theory and could be explained by it. The ranges and standard deviations as well as the means were relevant in the interpretations, both individually, and expressed as the coefficient of variation statistic, see Figure 4.15. on page 169. The theoretical claim that the positive Modes are manifestations of psychological integration, whereas the negative Modes manifest unintegrated material from a variety of past sources, could be said to be illustrated by the Modes' relative coefficient values. In general, higher coefficients indicate a construct of greater diversity/idiosyncrasy, whereas lower coefficients indicate greater conformity/social regulation. It can be seen that the lowest coefficients cluster in the central five positive Modes, illustrating Karpman's five options (Karpman 1971). Of these, the most integrated, conforming or socially regulated are STRUCTURING, NURTURING and COOPERATIVE, which are Modes developed in response to particular cultural socialisation and maturation processes. Statistically this shows in the narrower ranges as well as the lower coefficients. Closely related is ACCOUNTING, which is the way a person has learned to respond to and assess the stimuli of current reality. The mean is lower, but the range and standard deviation are a little higher, consistent with there being less social regulation in the development of this Mode. Linked, through the pattern of means, but showing much wider variability, is SPONTANEOUS, the Mode for uncensored and unregulated, but age and context appropriate, self-expression. This Mode belongs in the central five in terms of its manifestation of a person's mature uniqueness, the way they express their energy creatively on their own account. The greatly elevated range and standard deviation in spite of the lower mean are consistent with this explanation. The relative balances of the statistics for the four Child Modes lend credence in similar ways to the following theoretical claims.

The higher coefficient of COMPLIANT/RESISTANT, because of the lower mean for this Mode, denotes a greater variability than appears at first glance. Not only is this the Mode with two distinct aspects, but it is the one that manifests the wide diversity of human effort to learn to cope with what seems uncopable with. It manifests defensive behaviours derived from counter-

productive social learning, hence the contrast with COOPERATIVE, the Mode that manifests appropriate and desirable socialisation that helps people get along together well. Because the negatively socialised strategies do not work, there is more variance of use, so the coefficient of variation of COMPLIANT/RESISTANT can be expected to be higher than that of COOPERATIVE, though less than that of IMMATURE because of the conforming effects of socialisation. The theoretical explanation for the diverse nature of IMMATURE Mode as illustrated by the statistics is that not only, as with SPONTANEOUS, is this Mode a manifestation of unsocialised self-expression, but it lacks even the regulation of normal appropriate maturation. IMMATURE ways of behaving are therefore the most idiosyncratic and individualistic of the model. They could be said to be evidence of lack of social learning and maturity.

Lastly the two negative Parent Modes, CRITICISING and MARSHMALLOWING, have higher and matching ranges and standard deviations, with lower and matching means, giving high coefficients of variation. This denotes a highly significant variability of response that is fully consistent with the previous explanations and statistical evidence for the meaning of these two Modes, which could be said to be manifesting behavioural relics from a variety of past persons.

### **Issues of Validity and Reliability**

The Pilot results delivered a range of evidence of different aspects of validity and reliability of the instrument. Firstly is a focus from a theoretical perspective. Neuman (1994) poses a basic question about validity of constructs, "*Do the various indicators operate in a consistent manner?*" (page 134). Both this and the previous chapter have outlined evidence to offer an affirmative reply on this count. The various analyses revealed the needs for item and descriptor refinement but confirmed that on the whole the questionnaire produced consistent and accurate results.

Convergent and divergent validities were demonstrated by both the clustering of the positive and negative Mode scores separately, and also the lack of, or negative, correlation between the two clusters. Cross data referencing of respondents' phenomenological and historical verification, and administrators' and group members' social and behavioural verification, lent weight to the claim of face and content validity. The accuracy of the test was shown sometimes in the fine detail of the scores. For example:

- The extreme diversity of a particular group (Site 1) showed up in the extreme ranges of scores on its group profile.

- The group of Mental Health Workers had an unexpectedly high average CRITICISING score. This turned out to be due to 'outliers', who were identified by the administrator as exceptional in the group and for whom the high scores were accurate.

The following perspective is a practical one focussing on operationalised validity. Gough (1965), quoted in Hogan, Hogan & Trickey (1999), postulates three levels of validity necessary in the psychometric world:

1. Does the test correlate with relevant criteria?
2. Do high and low scores correlate with others' estimates and expectations of social interaction with the said high and low scorers?
3. Do details of test scores correlate with non-test behaviour in a way that provides for accurate predictability on the basis of test interpretation?

Hogan, Hogan and Trickey (1999) summarise these points in one question:

How many inferences can we safely make about a person from the evidence of the test scores?

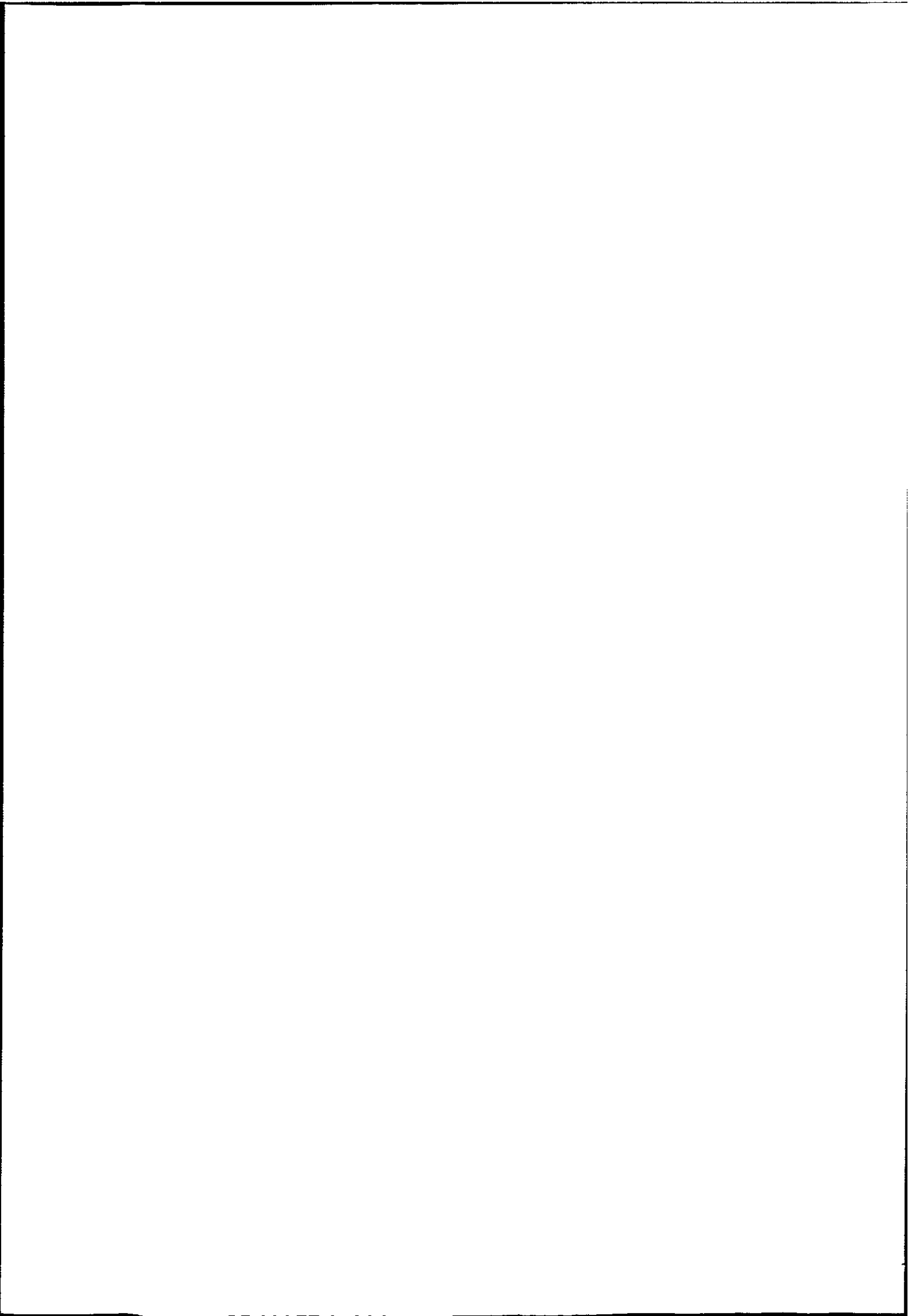
To date the Pilot data confirm that the FFI test scores, accurately and sensitively interpreted, give many useful inferences. From the point of view of the aim of the FFI the questions are:

- "Does the FFI illuminate, describe and explain personal behaviour patterns in a way that increases test-takers' self-awareness?"
- Does the FFI provide insights that are useful in enabling positive behavioural change?"

A typical example from the Pilot gives an answer to these questions. A social worker with ingrained habits of overwork and increasing symptoms of stress and ill-health produced a profile with high MARSHMALLOWING and COMPLIANT/RESISTANT scores and low COOPERATIVE and STRUCTURING scores. This produced scoring ratios lower than she expected. Slightly shocked, she was curious to explore the make-up and meaning of the profile, and the nine Modes. This in turn produced an awareness that the 'noble self-sacrifice' and 'ever-giving' nature of her style of working (and in the family) were in fact not as positive as she had believed, and so not ideals to be striven for after all. She expressed three key new understandings:

- Over-tolerance and self-denial belong in the negative and destructive aspect of caring.
- Limit-setting belongs in the positive aspect of control (which she hadn't known existed).
- Being willing to say "No" on one's own behalf is assertive and that belongs in the positive aspect of socialised self.

She resolved to learn to say "No" and take care of herself as well as others, as this would be healthier for them all.



A further example from the Pilot came from one of the Test-Retest groups. The woman took the feedback from her first test very much to heart. Her problems were lack of decisiveness and a sense of endless struggle to get her needs met. She resolved, as the woman above, to make changes. She negotiated new ways of sharing out work and time for herself at home. On receiving the second set of results she was surprised and delighted at what seemed like confirmation of the changes she had made:

- STRUCTURING and Control ratio was up. "I have more authority now".
- COMPLIANT/RESISTANT was down and SocC ratio was up. "I am more assertive and I struggle less".
- MARSHALLOWING was down and the Care ratio was up. "I do less of the self-sacrifice nowadays".

She was puzzled to find that her SPONTANEOUS score was also down, but through discussion wondered if it was because so much energy had in fact gone into new social learning. These examples were classics. Many people found their profiles and the explanations about the Modes led them to understand themselves better. Learning how the model worked seemed to help them make sense of how they got along with others, and how problems could be tackled.

If validity is about the 'trueness' of a test from many angles, then reliability is about dependability. 'Is the test accurate and can I rely on it working properly?' The Pilot Study with its 21 groups provided evidence of the viability of replication and the consistency of the patterns of groups' results gave evidence of representative reliability. Stability over time as a feature of reliability, as explained before, is not relevant because of the aims of the FFI.

Great care was taken to standardise administration of the test, see Chapter 3, page 104. However there were inevitable variations in style, skill and attitude of administrators, and atmosphere and practicability of context. On this matter Nunnally (1978) states,

*"To the extent that an approach to measurement provides very much the same result regardless of these opportunities for variations to occur, then it is reliable"* (page 191).

Nunnally suggests that when this can be shown to be so, as the FFI results do, then generalisation can be made from a particular use of the measurement method to a wider variety of other circumstances in which it could be employed.

What occurred consistently in exploring the data through all the various analytical methods cited was evidence of a coherence of meaning both theoretically in explanations of the phenomena and pragmatically in terms of accuracy of match between scoring patterns and the characteristics of both groups and individuals. Diagnostically this coherence made sense to individuals exploring

...the ... of ...  
...the ... of ...  
...the ... of ...  
...the ... of ...

...the ... of ...  
...the ... of ...  
...the ... of ...

...the ... of ...  
...the ... of ...  
...the ... of ...

...the ... of ...  
...the ... of ...  
...the ... of ...

...the ... of ...  
...the ... of ...  
...the ... of ...

...the ... of ...  
...the ... of ...  
...the ... of ...

...the ... of ...  
...the ... of ...  
...the ... of ...

and discussing their profiles in feedback sessions. Mode scores, and at a more detailed level also descriptor and item scores, were usually recognised as accurate, and when they caused surprises or incredulity, either there was a pragmatic reason, e.g. a faulty item, or new insights were engendered. One respondent was shocked to see a higher than expected score for 'bossy', which is a descriptor for CRITICISING. When he discovered that the score was mainly from an item about self-bossing, he realised the accuracy of it and was ready to accept that he did do this to himself, and was ready to realise other ways he gave himself a hard time quite inappropriately.

This example also illustrates two important features of the instrument:

1. The test seems capable of identifying behaviour patterns that are internally experienced rather than externally acted out. There were several instances of this phenomenon identified by the administrator of Site 15 in extensive interviews giving cross data evidence in relation to group members. In these cases scoring patterns only made sense in terms of intrapsychic behaviours, and these interpretations (tentative and academic though they were) made a new sense of some interpersonal difficulties in the group. As the group manager, the administrator found these insights useful for increasing his understanding and sensitivity in dealing with the problems.
2. The test and effective feedback can be a valuable way for respondents to start learning the TA theory for further use in personal and professional development.

In assessing the accuracy of the test in portraying the characteristics of respondents, it is worth considering the point of view expressed by Hogan, Hogan and Trickey (1999) on what they reckon is the basis for a test's validity. They suggest that "*Item responses are forms of self-presentation, and as such, they are snapshots of the person's typical interpersonal style*" (p 8). This means that if the person's profile matches their 'reputation' – their typical interpersonal style - that is evidence of test validity, and therefore of its usefulness for prediction of behaviour. It would seem that there is some preliminary evidence that this is the case with the Functional Fluency Index.

The next and final chapter draws some conclusions from the findings of the Pilot Study and highlights implications both in terms of TA theory and of the psychometric potential of the instrument.



## CHAPTER 6

# CONCLUSIONS AND THE WAY FORWARD

### The 'Tolstoy Effect'

*"All happy families resemble one another, but each unhappy family is unhappy in its own way".*

The opening sentence of 'Anna Karenina' by Leo Tolstoy 1875

This famous observation gave rise to a new term during the process of data analysis of the Pilot Study results. Tolstoy's assertion conveys a depth of meaning that speaks poignantly to the human condition. The patterns of human behaviour shown in the profiles provided evidence of its veracity from several perspectives. In each case the positive Modes of behaviour exhibited greater integrated wholeness, while the negative Modes manifested more variance and therefore greater fragmentation. The term 'Tolstoy Effect' was given to this clear pattern of differentiation between the positive and the negative Modes. The Tolstoy Effect had in fact been evidenced in the earlier stages of the study by the difficulty in choosing descriptors and creating test items for the positive Modes as compared with the ease of doing so for the negative Modes. This same difference arose during the analyses in describing and dissecting the Mode characteristics. The coherent blending of the positive Modes made it hard to differentiate between their various separate aspects, whereas with the negative Modes the various separate aspects seemed to stand out more clearly.

### The Nature of the Functional Fluency Model and Instrument.

The way in which the instrument seemed to tap into the heart of human experience at a very fundamental level provided the foundation for its success in mapping people's characteristic patterns of behaviour, their social 'response-ability'. The profiles created from the questionnaire results provided a wealth of detail that could be considered by respondents in stages, as appropriate. There was a considerable level of accuracy both for individuals and groups, as demonstrated through the various analyses and discussed in Chapters 4 and 5. As well as this, many respondents were extremely positive about the accuracy, interest and usefulness of their results. Without the evidence from the data analysis, the latter could be explained away as 'Aunt Fanny Error' (Tallent 1958), see Chapter 2, page 43.

The Functional Fluency model demonstrated appropriateness for the task in hand; to portray the pattern of a person's habits of functioning according to a set of declared constructs. The model's conceptual consistency and relevance were appreciated both by participants who were familiar with TA and those who were not. The former sometimes needed reminding that it was

behavioural modes that were being measured, not ego states, hence a need to make the differentiation even clearer, see page 224, in order to avoid the pitfalls outlined in Chapter 2. The excitement and interest generated by Pilot participants confirmed that here was a useful new model to add to the TA collection. Steiner (1972), when considering the development of TA, wrote,

*"I predict that more and more our models will be insufficient to adequately explain all that we know about human behaviour. This will be a joyful event rather than a sad one for true scientists. (page 85). "Science does not advance through the rebuilding and revamping of old models, but by leaving behind models which become less useful and inventing new ones" (page 86).*

The theoretical and psychometric properties of the new model will offer a means to clarify conceptual confusions of the past for the sake of future empirical research using TA theory.

The Functional Fluency model can also stand quite separately from the TA world. The validity of the conceptual components as expressive of important human characteristics, see Chapter 2 page 32, is supported by the Pilot results (Gopnik, Meltzoff & Kuhl 1999, Baumrind 1991). The model's integrated combination of positive modes of behaviour illustrates the subtlety of functioning referred to by Donaldson (1992):

*"Passionate curiosity empowers the intellect. Also the achievement of new understanding is normally accompanied by delight. The intellectual modes are marked, nevertheless, by an experienced distinction between thought and emotion and by a measure of control that makes possible the exclusion of certain kinds of emotion, namely those that are inappropriate because they are liable to distort thought" (page 141).*

She captures here the crucial combination of the intrinsic energy of the self, harnessed positively in the interest of realistic engagement with the present moment. This can be described as the Integrating Adult in action, manifested through the behavioural modes of the Functional Fluency model.

### **Scoring Issues**

In terms of the scoring, it seems that the overall Index score is a neat and convenient generalised indicator of positive/negative social functioning. It would potentially have value in relevant correlation studies. However, it is only a blunt indicator and therefore of limited value, especially as part of individual participant feedback. Greater value is gained from a focus on profile scoring patterns and comparative scoring levels on the set of nine scales. The meaning of each aspect of scoring depends not only on its relation to the other scores, but on contextual and existential factors as well, for example, recent parenthood, job change or traumatic event. Therefore no score should be interpreted without taking other relevant factors into account. This important matter is also emphasised by Hogan and Hogan (1996):

*"Scales should not be interpreted in isolation. The meaning of a single scale depends on the scores on the other scales in the inventory" (page 1).*

The evidence so far suggests that the inevitable complexity of a measurement of human functioning is portrayed by the FFI with a useful degree of clarity and coherence. The Pilot Study results indicate that in terms of validity and reliability a successful foundation on which to develop the instrument has been achieved. As proposed from the start of the project, the FFI questionnaire is designed to indicate and illuminate the nature of certain aspects of human functioning, with the intention of creating a tool for enhancing self-awareness and emotional literacy. The intentions and plans as laid out in the initial chapters of the study are therefore on course.

### **Development of the Scoring Method**

The scoring mechanism as outlined in the methodology worked well for its Pilot Study purpose, and showed potential for development. The skew that was built in achieved its aim of providing a positive slant on scoring profiles. As planned this did help respondents to focus optimistically on their results. The strategy seemed productive in view of the fact that negative characteristics as well as positive ones are named in the feedback materials. The temptation to take offence or fright at negative evaluation was offset by the emphasis on the positive. In the Pilot Study population of reasonably socially effective people this was not a great problem, though several respondents reported being affirmed by the positive overall balance they found. It might be even more important a strategy in usage with less socially adequate populations.

The response scales of the test required ordinal estimation. Respondents were asked to estimate the likelihood that they would take the action in the question. Giving a choice of estimated likelihood allowed respondents to express a sense of the conditionality of their answer. Those respondents whose administrators had explained to them more clearly how this worked, how putting "Slightly likely" as an answer to a question asking "Would you do something.....?" was a way to take into account that under many conditions one would not do it, seemed to appreciate this linguistic mechanism. Future instructions and training for administrators would therefore be emphasising the importance of this explanation.

The disadvantage of an ordinal scale instrument such as the FFI is the impossibility of true standardisation and therefore facility for realistic comparisons between respondents' scores, i.e. norm-referencing. However, examination of the range of possible scores showed that the minimum possible FFI is 0.25 and the maximum is 9. Furthermore, scoring equally across each Mode leads to a neutral score of 1.5, see 'phantom population' average score, Figure 4.6. page 110. It can be seen that the ratio of the minimum to the neutral scores and the neutral to the maximum scores are equal (6), and that, therefore, the adoption of a logarithmic scale would have the effect of

equalising the intervals and removing the skew. This gains the effect of a linear scale. In addition, in order to originate the scale at zero, thus avoiding minus scores, the calculation can include multiplication by 4 before logging:  $\log_{10}(FFI \times 4)$ . (This uses the minimum possible score of 0.25 as the reference).

This means that in future the FFI scores can be plotted on an axis with a zero-originated scale of equal intervals, enabling the considerable psychometric advantage of availability of norm-referencing as appropriate.

## **Applications**

There are initial indications, gleaned from professional and social cross data evidence, that certain profile patterns may correlate with particular personal qualities important in terms of measurement and prediction in the context of, for example, personnel selection. For instance, maturity, kindness, leadership, acumen, creativity, warmth, ingenuity, decision-making, stability and energy have been indicated, though these are but tentative observations requiring further evidence to substantiate them.

It therefore appears that there may be a wider applicability for use of the FFI than initially considered and planned. As well as in possible personnel selection, the FFI may also have a use in counselling and psychotherapy as a diagnostic tool. This was mentioned in the previous chapter, see page 216, with particular reference to the cross data analysis of Site 15 results that gave accurate indications of respondents' intrapsychic processes. Several alerting factors that might signify potential psychological problems were noted from scoring profiles, including:

- Low FFI
- Very uneven Central Balance
- Very high or low ACCOUNTING in relation to other positive Modes
- Element or ratio imbalance
- Mode score anomalies

How these might be usefully formalised in terms of prediction or diagnosis in relevant contexts remains to be seen. However, several TA practitioners made suggestions for using the instrument to assess the effectiveness of the therapeutic process, as well as for diagnosis and a tool for client learning.

The initial aims for application of the tool as specified in Chapter 1 have been widened to include selection, support and training of personnel in other 'helping professions' such as social work, child care, health and the police as well. Several Pilot Group administrators, who were

managers in such professions, expressed enthusiasm for using the instrument in their departments, e.g. adoption and fostering, residential social work with adolescents, prison staff. Some of the projects in which it was suggested that the FFI could play an important role in enhancing the emotional literacy of staff were as follows:

- A bullying at work intervention programme.
- A team development in management programme.
- A training appraisal exercise, as a 'before and after' tool.
- A programme for identifying and helping staff members who may be dysfunctional, despite the training provided.

Participants in the Pilot Study expressed enthusiasm for the style and ease of test completion and for the learning it offered, see the last section of Chapter 4. They identified both learning from actually doing the instrument and learning from feedback and the ensuing reflective processes (Kolb 1984). As related in the previous chapter, many participants expressed new motivation for personal change. It would seem that the educational outcome originally envisaged could be valuable in a wide variety of contexts.

### **Reflections on the Research Process**

There are several important questions to be answered:

1. Do the stated findings and conclusions arise from the empirical evidence?
2. Were the studies conducted with respect for all involved?

Answers to both of these questions are in the affirmative, to the best knowledge and effort of the researcher. Evidence can be found in the previous chapters of both the intentions and the findings on these matters.

3. Are there flaws and weaknesses in the research process of data collection and analysis?

Various limitations are acknowledged. They fall into two main headings:

#### **Influence of resource constraints.**

- The make-up of the Pilot sample groups was not ideal in that there was a bias in some groups of age and/or sex.
- Because of the failure of two administrators to complete the groups they had agreed to do, the Student Group turned out to be much the largest group.
- As described previously, there was a lack of feedback possibility for the Student Group, causing a lack of cross data information on this sample.

### **Limitations of methodological design**

- As described in Chapter 4 page 166, the samples completing Forms A and B were not accurately matched, which meant that the data were not reliable enough to count as a credible split-half study.
- As described in Chapter 4 page 184, the design of the Test-Retest Studies, along with the non-completion of two of them, meant that the data were very tentative.
- With hindsight, there appeared to be two 'missing' descriptors, i.e. adjectives to describe aspects of Modes. This became apparent through the processes of feedback and evaluation. A reason why they did not appear in the Word Pictures, see page 78, was that they were not in the original selection of ninety words chosen for the Descriptor Sort Exercise. This was an error of omission. The matter is addressed in the following section on refinement plans.

Finally, as described in Chapter 3, page 101, there was the issue of the method of weighting for ACCOUNTING Mode. The aim of the weighting was to make it comparable with the Total Positive Parent and Child Scores to create the Central Balance Score. The policy of adopting the method of simply doubling the scale score, rather than doubling the test items for the scale, worked well enough for the Pilot Study. The latter more methodologically acceptable procedure was planned as part of future refinement.

### **Plans for Instrument Improvement and Item Refinement**

From the point of view of the practicalities of this undertaking, the task is firstly to collate and organise the relevant information from the range of contributing sources, namely:

- Respondents' evaluations, Chapter 4, page 186.
- Administrators' evaluations, Chapter 4, page 196.
- Notes from discussion with individual respondents.
- Notes from feedback sessions.
- Notes from informal case studies.
- Factor Analysis results, Chapter 4, page 175.
- Reliability results, Chapter 4, page 172.
- Comparison of Forms A and B, Chapter 4, page 166.
- Test-Retest Study results, Chapter 4 page 184.

The next task is to summarise the proposed needs for change according to the part of the instrument needing amendment.



## **Introduction and Instructions for doing the Questionnaire; matters of administration**

There are several practical improvements to be made: site the I/D Code on the front cover, add to the Job Title space, give information about TA on the Personal Details page, add the instruction, "Please wait for the OK from the administrator before turning over".

The language needs to be simplified and shortened. Three points of clarification for respondents need to be added:

- That the questionnaire is unusual.
- That the range of question-topics is wide.
- That it is OK to decide your own method of answering the questions.

Any future version for students needs to look livelier, with less print, some colour and graphics. Instead of putting "a big tick" to score, respondents will be asked to circle their choice of answer. Although the "big tick" was popular, occasionally its positioning by respondents was ambiguous. Administration resources and training need improvement. The instructions need to be in two sections. The first, general, sheet needs to include information about the purpose of doing the questionnaire, emphasis on the way that the 'likelihood' answers help to convey conditionality and a reminder to adjust the focus and style of the administration to suit the needs of the client(s). The second sheet should be designed as a 'bullet point' list of actions, so that it is easy to check off. It should include the improvements itemised at the end of Chapter 4.

The quality of administration and materials clearly has a major influence on the efficacy and usefulness of the instrument. Important developments are needed. Firstly, the paperwork, as pointed up above, needs to be more attractive and stylish. Secondly, the terminology for naming, describing and explaining the FFI model of human functioning must be helpful and consistent. Interconnections between this model and TA ego state models must be clear and theoretically sound. Any terms that might cause confusion with respect to TA concepts must be avoided, see the discussion in Chapter 2. The language should enable a flexibility of application meaningful to a variety of people. It should not create an ambivalence of meaning disguising conceptual confusion. This means that future diagram labelling and explanation using traditional ego state terminology must be avoided. It might be possible to retain the use of the term Parent as a metaphorical short hand for Social Responsibility. The fact that it can be used as a verb is important here. Further experimentation is necessary. Using 'Self' for the Self-Actualisation Modes would be more appropriate than Child, particularly given the professional contexts for application. Adult is probably the term most likely to invite confusion between ego states and functions, so



**ACCOUNTING** is the essential term to operationalise the functional category of Reality Assessment.

Thirdly, it may be advisable, for the same reason of avoiding conceptual confusion, to change the format of the FFI Profile and the functional diagrams in the feedback materials. An option is to follow the suggestion made by Stewart (2001) and use stacked squares instead of stacked circles, so that there is a visual difference of conceptual expression between the behavioural Modes of the FFI model and the ego states of the traditional TA models. Yet a further refinement for respondents' profiles is to have the scores expressed by shape rather than as at present by numerals. This will require further sophisticated programming, but would be worth it.

### **Forms A and B**

Equivalence of Forms A and B will be checked and improved by matching them item by item when the new item refinements are in place. Particular attention will be paid to the items about families and children in order to avoid an imbalance of focus.

### **Mode Descriptors**

There were several reasons for a need for improvement:

- Descriptors overlapped too much.
- There seemed to be an aspect of a Mode missing.
- Certain descriptors seemed to be misleading or unnecessary.

Each of these reasons was subtle in effect, but evidence from the statistical analyses sometimes pointed up lack of effectiveness of certain items by the ways they correlated, and in turn these led to identification of difficulties with the descriptor. After much consideration, consultation with colleagues and searching in the Thesaurus, the following ideas for change were generated:

### **STRUCTURING**

It seemed that 'authoritative' and 'directive' were somewhat too similar, and that it would help to expand the construct by replacing 'directive' with 'well-organised'. This would emphasise provision of security and opportunity through proactive planning, thus enhancing the empowerment aspect of the Mode.

### **NURTURING**

The aspect of NURTURING reflecting non-judgmental acceptance of people was lacking. The use of 'accepting' as a descriptor would be the same as Carl Rogers' (1951) use, when he talked about the core conditions for therapeutic relationships. In the initial Descriptor Sort exercise, the adjective 'accepting' had been chosen frequently by the judges in this way for NURTURING, but

some of them also chose it for COMPLIANT/RESISTANT in the sense of 'putting up with', so it was rejected as a descriptor. With the knowledge gained from the research process, it seemed desirable and appropriate to use 'accepting' after all to describe NURTURING, because its specific meaning would be manifested through the wording of the items written to test it, not by the use of the actual word itself. Putting in 'accepting' meant the removal of another descriptor. The choice was 'protective', as it was inherent in the notion of 'cherishing' and therefore not strictly necessary. These changes were intended to enrich the construct and keep it accurate with a stronger focus on 'being' rather than 'doing'. A further benefit was increased emphasis on the complementary effect of STRUCTURING and NURTURING Modes put together to form the TA concept of Positive Parenting. This equates to Diana Baumrind's 'authoritative parenting' (Baumrind 1991) see Chapter 2. There were some indications from evaluations that 'encouraging' came over as too active a descriptor for NURTURING. Items should be scrutinised to make sure they focus on the appreciative and affirming aspect of 'encouraging'.

#### ACCOUNTING

The descriptor in ACCOUNTING Mode that tended to be the odd one out was 'precise'. This was partly the effect of certain of the items for this descriptor that implied potential obsessiveness rather than appropriate accuracy, e.g. "Would you weigh the suitcases to ensure they will meet airline baggage limits?" One option was to keep 'precise' as a descriptor and improve the focus and wording of the items. Another option was to replace 'precise' with another descriptor eligible for a place, namely 'enquiring', as discussed in the Word Picture Selection section of the Methodology chapter. This would expand the ACCOUNTING construct in a different way from 'precise' by focussing instead on active data gathering. This was not to be confused with 'curious' in the SPONTANEOUS word picture. 'Precise' was not overlapping with other descriptors, however, and did provide an important aspect of the construct, when used in the sense of 'accurate'. A further option was to change the descriptor from 'precise' to 'accurate', see Chapter 3, page 76 for initial Word Picture discussion. It might, however, be argued that if someone is alert, aware and grounded and is using rationality to evaluate matters, then accuracy is already built in. This argument renders both 'accurate' and 'precise' redundant, and makes the addition of 'enquiring' the more reasonable option. If 'enquiring' were to be used instead of 'precise', then the items for the other ACCOUNTING descriptors should be scrutinised for the inclusion of accuracy as an aspect of their meaning. The data-seeking properties of 'enquiring' were considered a most valuable addition to ACCOUNTING, so its inclusion was the final decision, with attention to the 'accuracy' issue to be built in.

## COOPERATIVE

In this Mode, the odd-one-out descriptor was 'sociable'. There were two aspects to this:

- a) because of 'friendly', 'considerate' and 'adaptable', it was somewhat redundant, and
- b) sociability, as distinct from friendliness, seemed to conjure up for respondents notions of gregariousness and extroversion that didn't necessarily fit the construct.

What was missing from the outset for this set of descriptors was a word to capture the aspect of positive social learning that was to do with being able to recover well from set-backs and upsets, namely 'resilience' (Lewis 1999). As Weare (2000) also points out:

*"An important aspect of mental, emotional and social health is the ability to process difficult experiences, to learn from them and move on"* (page 26).

This leads to self confidence and aids respectful assertiveness. The remedy was to exchange 'sociable' with 'resilient', which had the added advantage of reinforcing the personal potency aspect of COOPERATIVE, the Mode for positive socialisation.

## SPONTANEOUS

This was the Mode to suffer from a significant researcher error, i.e. the inexplicable omission from the original 90-word list of the word 'playful'. Realisation of this fact started with the first scorings and feedback sessions in the Pilot study. SPONTANEOUS Mode, as it stood, needed the element of 'insouciance' that could be provided by using 'playful'. An ongoing exercise was devised with personnel involved in the Pilot to check out which Mode they thought the descriptor 'playful' should belong to. After considering the nine options, every person chose SPONTANEOUS, so adding it in to this Mode would seem a well-supported decision. The descriptor to be replaced by 'playful' became clear through the processes of data analysis and evaluation. It was 'ingenious'. Again there were two strands leading to this conclusion:

- a) It seemed to overlap with 'creative' and 'imaginative'.
- b) It seemed somehow too complex to belong fully in SPONTANEOUS, as though ingenuity were actually a combination of several Modes, see also page 92.

In terms of general item refinement for SPONTANEOUS Mode, removal of 'ingenious' as a descriptor freed up the use of some of the aspects of the 'ingenious' items for improving the quality of the 'creative' items. A difficulty with these had been a tendency towards being 'arty-crafty', or 'wish-washy' that biased them in terms of gender cultural norms. The 'ingenious' items included ideas that packed more punch.

These changes constituted a delicate and complex process of improvement of the basic structure of the instrument, and were also part of the whole review of items and their equivalence

THE UNIVERSITY OF THE WEST INDIES

Faculty of Education  
Department of Educational Studies  
St. Augustine, Trinidad  
Trinidad and Tobago

EDUCATIONAL RESEARCH  
INSTITUTE

EDUCATIONAL RESEARCH  
INSTITUTE

EDUCATIONAL RESEARCH  
INSTITUTE

on forms A and B. Items to be removed in view of these changes would therefore be those for testing the following descriptors: 'directive', 'protective', 'precise', 'sociable', 'ingenious'. Items to be added were those for testing these descriptors: 'well-organised', 'accepting', 'enquiring', 'resilient' and 'playful'.

These changes had implications for other descriptors. In order to maximise the richness of description for each Mode, the following descriptors' items need to be checked:

- 'authoritative' – to make sure it included directiveness.
- 'cherishing' – to include a sense of protectiveness.
- 'rational', 'evaluative' and 'alert' – to include a sense of precision/accuracy.
- 'friendly' – to see if the redundant 'sociable' items could be used for enhancement.
- 'creative' and 'imaginative' – again, to see if the 'ingenious' items could be used for enhancement.

Versions of the item validation exercises, as described in the Methodology, would be used to ensure optimum validity of the new items. As ever, the nuances of meaning of various words, and the effect of their combinations for describing the Modes, are of paramount importance. The aim is an improved set of Mode Word Pictures operationalised into effective test items.

### **Improvement Criteria for Test Items**

These criteria were formed from the results of the full range of data analyses:

- Avoid assumptions of social, cultural, familial norms, or of skill/equipment possession.
- Modernise, add humour (with care), and reduce obviousness of answer and double negatives.
- Avoid context dependency and gender stereotypical focus.
- Improve accuracy, clarify meaning and sharpen focus.
- Check items for Social Responsibility Modes re balance of Care and Control of self and of others.
- Adjust items with regard to the issue of ambiguity/specificity; see the Double Paradox Matrix, Figure 4.17. page 195.

This last issue is particularly important. Lanyon & Goodstein (1997) point out that, "*The clearer or less ambiguous the content, the more susceptible it is to the influence of response sets*" (page 199), in other words to the efforts of respondents to influence their scores in particular ways either consciously or unconsciously. The balance therefore between ambiguity and specificity is crucial to the effectiveness of items, see also page 195.

## **Issues for Item Refinement Identified from the Factor Analysis**

All the items showing up as discrepant in the Factor Analysis components had been noted by respondents or through scoring anomalies as being problematic in some way. For example:

- Form A, STRUCTURING 'consistent', Item 47, - 'Would you refuse all applications after the deadline, as you said you would?' This was perceived as too fierce to be genuinely enabling. The verb 'refuse' is probably the problem and an example of a possible refinement would be, 'Would you stick to your advertised application deadline as you said you would?'
- Form B, MARSHMALLOWING 'inconsistent', Item 70, - 'Would you occasionally insist on the safety rules, but otherwise let them do as they please?' This was perceived as acceptably flexible and therefore tested MARSHMALLOWING inaccurately. Rewording is necessary along the lines of 'Would you usually insist on following the safety rules, but then sometimes allow them to be broken?' This would clarify the meaning.

## **Issues for Item Refinement Identified from the Comparison of Forms A and B**

Comparison of the profiles from the two forms shows the main Mode differences to be:

- MARSHMALLOWING, Form A lower scoring.
- COOPERATIVE, Form A lower scoring.
- SPONTANEOUS, Form A higher scoring.

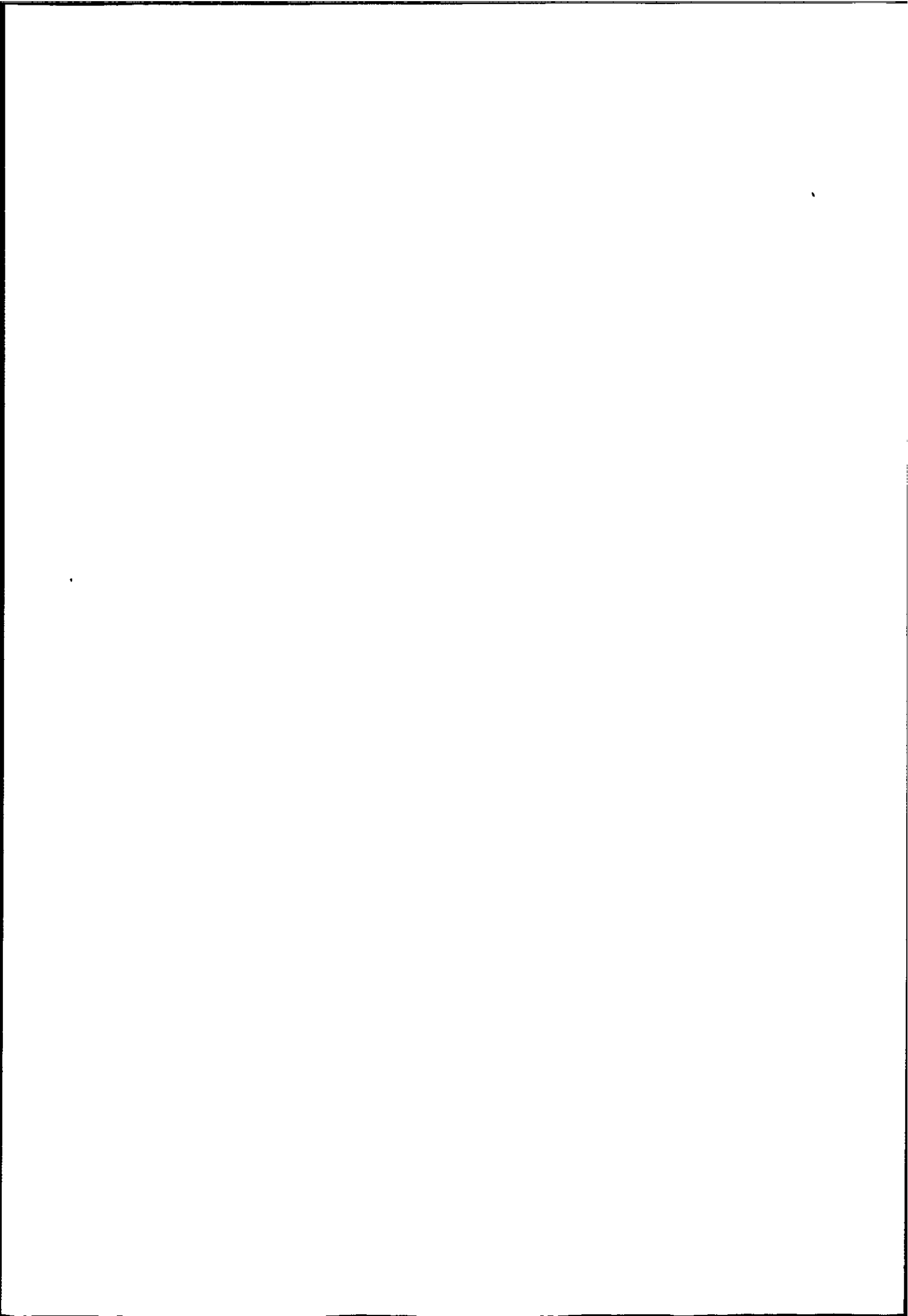
The sets of items for these Modes need comparative assessment firstly to deal with any faults and then to adjust comparability in terms of topic, focus and character.

## **Issues for Item Refinement Identified from the Reliability Analysis**

As with the Factor Analysis, Cronbach's Alpha reliability analysis served to confirm doubts about certain items. In particular it was useful in indicating high and low endorsements and items with much lower or higher means, which usually meant that the item was faulty in some way. The patterns of correlation as described in Chapter 4, page 172, also showed up anomalies that joined the list of doubtful items, to be refined using the criteria above. The evidence about the generalised nature of the descriptor 'dominant' endorsed a growing conviction that it would make a more effective Mode name than CRITICISING for negative control, being more of a superordinate construct. This would require further consideration.

## **Issues for Item Refinement Identified from the Test-Retest Studies**

The unexplained anomalies and discrepancies referred to in Chapter 4, page 184, formed a further list of items also to be refined using the criteria above.



## **The Way Forward**

### **Refinement**

Most of the 'problem items' appeared consistently on all the various lists. Refinement according to the criteria will also take into account items' necessary theoretical validity, their psychometric properties as well as what they probe and/or reveal. The proposed needs for change will be mapped onto Item Refinement Plans, updated versions of the item refinement drafts referred to in Chapter 3, and which list all the items organised by List, Mode and Descriptor. Finally a revised edition of the Questionnaire booklet will be produced.

Overall effectiveness will depend not only on the accuracy of the measurement instrument, incorporating the various improvements identified through the Pilot Study process, but also on the quality of the feedback design and delivery. The latter will require further development of methods and materials in the light of the Pilot Study results.

### **Development of the Functional Fluency Index**

The refined instrument will be piloted with several groups with differing social and professional backgrounds, as well matched as possible for age and gender, for instance:

- A group or groups similar to those of the Pilot Study who scored above the Pilot average.
- A group of competent professionals from a context very different from the helping professions, e.g. advertising, entertainment, banking or engineering.
- A group of patients from a psychiatric prison hospital.
- A group of people suffering from chronic schizophrenia.

The groups will also complete a psychological adjustment test such as the Adjustment Scale of the Hogan Personality Inventory (Hogan & Hogan 1996) and if possible Hogan's (1969) empathy scale or similar. Potential outcomes from these studies will be:

- Further validity and reliability evidence (criterion and representative) for the FFI.
- Assessment of the efficacy of the various refinements.
- Consideration of how the FFI indicates potential social/psychological difficulties.
- Comparison with the Pilot Study results, for instance, to assess whether the negative Mode scores decrease with age for other populations and whether the gender differences are consistent.
- Follow up to Williams, Watson, Walters & Williams (1983) study in which they showed a negative correlation between 'Critical Parent' and high empathy scores.



In addition, carefully organised split-half and test-retest studies will enable assessment of the equivalence of the Forms A and B.

A range of linked studies of interest in supporting the development of the FFI will be undertaken if and when possible:

- A 'before and after' study in a therapeutic context with counselling clients.
- A study to investigate the correlations between ACCOUNTING and the negative Modes.
- A study to investigate the correlations between age and gender and high and low scoring.
- A study to investigate possible links between IMMATURE and CRITICISING Modes.
- A study to find out if other educational Behaviour Support Teams produce average group profiles similar to that in the Pilot Study.
- A study to find out if other groups of psychiatric workers produce Social Responsibility Mode scoring patterns similar to those of the Pilot Study.
- A study to investigate the possibility of links between FFI scoring patterns with temperamental characteristics (Thomas & Chess 1999) and with personality adaptations (Ware 1983).

These studies would throw light on the various questions that have emerged in the course of the data analysis. They would also clarify the variety of uses appropriate for the instrument.

#### **The move from the academic into the professional/commercial world**

In order to fulfil the aims of this project, it will be necessary to publish and market the instrument when suitably refined. Attention to the following factors will give a framework for the process. Guidance from the British Psychological Society for prospective psychometric test users includes a list of factors to bear in mind when selecting an appropriate test for a particular task (Bartram & Lindley 1994). To follow this guidance, the FFI should manifest:

- SCOPE – clarity about the range of people the test is suitable for, and about the range of attributes covered.
- FAIRNESS – to various groups to be included.
- RELIABILITY/ACCURACY of the instrument, how consistent and stable its results are.
- VALIDITY/RELEVANCE – of the instrument for the purpose.
- ACCEPTABILITY to potential users.
- PRACTICALITY with regard to equipment and resources needed.

Appropriate instructions and training processes will be required in terms of manuals and courses. Attractive and effective hard and software will be needed to make usage both easy and a pleasure. Creation of these as well as the norm referencing now possible with the revised and elaborated

scoring method, see page 219, will be part of the ongoing development of the FFI. The reputation of the instrument will depend on the confidence practitioners will gain from their experience of usage.

### **Renaming the Functional Fluency Index**

This last matter, of a suitable name for the instrument, has received much thought and consideration. The 'Functional Fluency Index', given that the concept of Functional Fluency is cited in the literature (Temple 1999), made an accurate working name for the duration of the project. However, except for those familiar with the new concept, it does not provide much indication of what it is about. As a term to be used in a catalogue, for instance, it would not necessarily convey that the instrument mapped personal patterns of behaviour. An effective full title must combine clear indication of the precise purpose of the questionnaire, with declaration of the overall conceptual aim. As discussed in Chapter 2, it must give a sense of both the notion of human flow of functioning, and the idea of capturing a snapshot of that process. The result of the efforts to achieve this combination will hopefully solve the marketing problem, while also maintaining accuracy, claiming responsibility and promoting the concept of Functional Fluency. The new full name proposed for future use is therefore:

**"The Transactional Behaviour Profile  
of the  
Temple Index of Functional Fluency"**

# List of Appendices

	<b>Page</b>
<b>Appendix A    Statistics Tables</b>	
A.1.            All Pilot Groups' Mode Means in Order of FFI Mean	234
A.2.            Correlation of All Modes With Each Other Using Pearson's R	235
A.3.            Coefficients of Variation	236
A.4.            Reliability Analysis	237
A.5.1.          Exploratory Test-Retest Study No 1	243
A.5.2.          Exploratory Test-Retest Study No 2	244
A.5.3.          Exploratory Test-Retest Study No 3	245
A.5.4.          Exploratory Test-Retest Study No 4	246
A.6.            Factor Analysis Component Patterns (Form A 1-10 & Form B 1-9)	247
 <b>Appendix B    Pilot Profiles</b>	
B.1.            Average Total Pilot Profile (NORM)	267
B.2.            Average Gender Profile Male	268
B.3.            Average Gender Profile Female	269
B.4.            Average Age Profile Under 20	270
B.5.            Average Age Profile 20-29	271
B.6.            Average Age Profile 30-39	272
B.7.            Average Age Profile 40-49	273
B.8.            Average Age Profile 50-59	274
B.9.            Average Age Profile Over 60	275
B.10.           Average Professional Responsibility Level Profile Basic Level	276
B.11.           Average Professional Responsibility Level Profile Manager Level	277
B.12.           Average Professional Responsibility Level Profile Director Level	278
B.13.           Average Pilot Group Profile 1 Further Education Lecturers	279
B.14.           Average Pilot Group Profile 2 Educational Psychology Students	280
B.15.           Average Pilot Group Profile 3 Police Officers in Training	281
B.16.           Average Pilot Group Profile 4 Psychometric Interpreters	282
B.17.           Average Pilot Group Profile 5 Mental Health Workers	283
B.18.           Average Pilot Group Profile 6 Behaviour Support Teachers	284
B.19.           Average Pilot Group Profile 7 Local Authority Managers	285

B.20.	Average Pilot Group Profile 8 Psychiatric Personnel	286
B.21.	Average Pilot Group Profile 9 Catering Students	287
B.22.	Average Highest Scoring Group Profile	288
B.23.	Average Lowest Scoring Group Profile	289
B.24.	Average Profile Form A	290
B.25.	Average Profile Form B.	291
<b>Appendix C</b>	<b>FFI Development Documentation</b>	
C.1.	Test Item Validation Exercise Results	292
C.2.	Questionnaire Form A	307
C.3.	Questionnaire Form B	322
C.4.	Scoring Details (Handscore Version)	337
C.5.	Scoring Details (Computer Generated Functional Fluency Scoring Programme [FFSP])	342
<b>Appendix D</b>	<b>Code of Ethics</b>	346

### Appendix A.1. All Pilot Groups' Mode Means in Order of FFI Mean

Groups	CRIT	MARSH	STRUCT	NURT	ACC	COOP	SPON	COMP/ RES	IMM	FFI
F.E. Lecturers N=10 Form B	32.90	32.10	59.90	60.60	55.40	60.70	49.00	34.80	24.40	2.79
Educational Psychology Students N=12 Form A	33.92	33.17	59.08	63.33	54.75	59.58	52.17	33.50	29.17	2.66
ITA Conference Group N=15 Form B	32.93	31.80	58.80	60.93	55.40	59.07	51.67	35.53	30.60	2.66
Individuals at Finches N=10 Forms A & B	35.80	31.90	56.50	58.60	53.80	59.40	56.60	32.60	28.90	2.65
Police Officers N=19 Form A	39.47	36.79	61.89	59.37	57.84	57.05	53.21	32.53	29.74	2.57
Village Parent Group N=8 Form B	33.88	32.75	58.00	58.75	51.00	58.88	46.38	32.63	30.13	2.57
Adolescent Care Workers N=13 Form A	39.23	37.15	61.31	61.08	58.23	53.69	58.00	36.85	29.08	2.55
Secondary Teachers & Ed. Consults. N=11 Forms A & B	32.09	34.82	59.27	60.00	53.45	57.91	49.64	37.64	29.91	2.53
Psychometric Interpreters N=7 Form A	33.57	32.57	55.71	59.14	53.71	58.14	49.43	39.00	28.29	2.50
F.E.Catering Lecturers N=10 Form B	40.10	38.40	60.00	61.80	59.40	62.20	49.20	34.30	29.70	2.49
Management Consultants N=8 Form B	37.38	34.13	58.00	58.38	56.00	59.25	53.88	35.13	31.88	2.49
Mental Health Social Workers N=14 Form A	34.93	36.14	55.00	60.00	54.36	56.93	50.86	38.43	26.86	2.46
Mental Health Workers N=18 Form A	36.56	35.44	59.33	59.06	53.00	54.06	55.28	38.06	29.67	2.40
Community Workers N=13 Form A	36.85	35.38	57.46	58.54	53.85	55.08	52.46	36.31	31.23	2.40
Secondary Teachers, London N=17 Form A	37.71	34.29	57.35	57.88	54.06	56.29	58.71	39.59	33.71	2.36
Youth Workers, London N=9 Form A	33.00	38.00	57.00	57.00	50.67	58.33	54.56	38.67	31.89	2.36
Behaviour Support Teachers N=9 Form A	43.44	36.11	60.00	63.44	58.78	59.89	58.78	39.89	36.11	2.34
Counselling Diploma Students N=17 Forms A & B	33.18	37.00	56.94	59.88	52.65	56.71	50.41	38.59	34.29	2.34
Local Authority Managers N=21 Form A	38.00	33.57	54.62	56.24	52.05	55.76	51.29	36.33	33.43	2.30
Psychiatric Workers N=10 Form B	35.90	41.40	57.80	58.50	50.60	57.60	47.10	38.00	30.00	2.25
Catering Students N=50 Form B	41.80	40.36	57.14	57.42	54.92	59.86	48.96	39.54	33.58	2.18
Significance (p)	<.001	.006	<.001	.031	.002	.002	<.001	<.001	.001	<.001

## Appendix A.2. Correlations of all Modes with each other using Pearson's R

	CRITICISING	MARSH-MALLOWING	STRUCTURING	NURTURING	ACCOUNTING	COOPERATIVE	SPONTANEOUS	COMPLIANT/ RESISTANT	IMMATURE
<b>CRITICISING</b> Pearson corr. Sig. (2-tailed)	1.000	** .248 .000	-.020 .724	** -.220 .000	** .189 .001	-.060 .295	.023 .688	** .249 .000	** .434 .000
<b>MARSH MALLOWING</b> Pearson corr. Sig. (2-tailed)	** .248 .000	1.000	.064 .268	.081 .159	** .157 .006	.051 .374	.012 .832	** .372 .000	** .210 .000
<b>STRUCTURING</b> Pearson corr. Sig. (2-tailed)	-.020 .724	.064 .268	1.000	** .586 .000	** .457 .000	** .450 .000	** .435 .000	** -.145 .012	** -.302 .000
<b>NURTURING</b> Pearson corr. Sig. (2-tailed)	** -.220 .000	.081 .159	** .586 .000	1.000	** .324 .000	** .441 .000	** .383 .000	-.005 .927	** -.388 .000
<b>ACCOUNTING</b> Pearson corr. Sig. (2-tailed)	** .189 .001	** .157 .006	** .457 .000	** .324 .000	1.000	** .285 .000	** .238 .000	-.015 .792	** -.228 .000
<b>COOPERATIVE</b> Pearson corr. Sig. (2-tailed)	-.060 .295	.051 .374	.450 .000	** .441 .000	** .285 .000	1.000	** .258 .000	* -.133 .021	** -.172 .003
<b>SPONTANEOUS</b> Pearson corr. Sig. (2-tailed)	.023 .688	.012 .832	** .435 .000	** .383 .000	** .238 .000	** .258 .000	1.000	.043 .458	-.055 .340
<b>COMPLIANT/ RESISTANT</b> Pearson corr. Sig. (2-tailed)	** .249 .000	** .372 .000	* -.145 .012	-.005 .927	-.015	* -.133 .021	.043 .458	1.000	** .361 .000
<b>IMMATURE</b> Pearson corr. Sig. (2-tailed)	** .434 .000	** .210 .000	** -.302 .000	** -.388 .000	** -.228 .000	** -.172 .003	-.055 .340	** .361 .000	1.000

Key: \* = significant at 5% level

\*\* = significant at 1% level

### Appendix A.3. Coefficients of Variation Tables

#### Coefficients of Variation of FFI Modes by Gender and Age

MODES	MALE	FEMALE	U 20	20s	30s	40s	50s	60s	NORM
CRITICISING	16.56	20.19	14.76	19.19	18.11	19.19	18.29	38.18	19.27
MARSH/ MALLOWING	19.39	19.67	14.63	20.28	19.43	19.17	20.29	16.33	19.80
STRUCTURING	10.00	8.88	10.00	9.66	9.31	9.15	8.62	12.03	9.31
NURTURING	9.88	8.00	9.82	10.50	8.45	8.20	9.50	15.00	9.32
ACCOUNTING	10.98	11.02	9.64	11.89	11.30	10.91	11.45	3.39	10.90
COOPERATIVE	10.12	9.71	8.33	10.17	9.29	10.34	10.34	11.90	9.82
SPONTANEOUS	16.00	13.40	14.17	12.31	15.09	134.15	15.00	14.72	14.42
COMPLIANT/ RESISTANT	16.11	16.54	13.50	17.18	15.28	16.22	16.00	28.38	16.32
IMMATURE	19.64	22.43	22.73	16.67	19.06	22.26	22.86	19.64	21.94

#### Coefficients of Variation of FFI Modes by Levels of Professional Responsibility, Forms A & B and by Highest & Lowest Scorers Groups

MODES	BASIC	MANAGER	DIRECTOR	FORM A	FORM B	HIGHEST SCORERS	LOWEST SCORERS	NORM
CRITICISING	19.50	18.92	18.28	17.70	20.76	18.90	11.47	19.27
MARSH/ MALLOWING	19.54	19.23	15.52	19.37	18.76	14.14	10.29	19.80
STRUCTURING	9.60	8.90	10.31	9.55	9.00	6.81	10.42	9.31
NURTURING	9.61	9.20	8.85	9.17	9.73	7.69	12.53	9.32
ACCOUNTING	10.95	10.04	16.10	11.57	10.16	5.02	10.85	10.90
COOPERATIVE	9.79	9.57	11.80	10.07	9.57	5.74	9.25	9.82
SPONTANEOUS	14.77	13.33	15.61	12.81	15.31	14.32	13.54	14.42
COMPLIANT/ RESISTANT	16.32	16.11	15.26	15.84	17.05	16.86	11.48	16.32
IMMATURE	22.10	20.94	20.55	20.10	24.10	20.81	13.28	21.94

#### Coefficients of Variation of FFI Modes by the Selection of 9 Pilot Groups

MODES	FE LECTURERS	ED. PSYCHS	POLICE OFFICERS	PSYCO/ METRIC INTERPRETERS	MENTAL HEALTH WORKERS	BEHAVIOUR SUPPORT TEACHERS	L.A. MANAGERS	PSYCHIATRIC PERSONNEL	CATERING STUDENTS	NORM
CRITICISING	15.21	11.53	17.26	16.53	18.62	17.53	14.32	23.69	15.33	19.27
MARSH/ MALLOWING	14.16	12.45	22.65	15.33	13.80	23.92	18.00	15.98	15.30	19.80
STRUCTURING	10.52	8.47	6.69	10.55	7.95	7.63	9.82	5.67	10.60	9.31
NURTURING	12.46	6.51	9.63	4.93	7.39	5.62	11.00	6.46	10.37	9.32
ACCOUNTING	13.04	11.78	8.76	16.63	11.32	7.27	12.33	6.35	9.62	10.90
COOPERATIVE	10.66	9.60	8.91	8.98	10.83	10.28	10.36	6.91	8.48	9.82
SPONTANEOUS	17.20	18.04	12.02	12.73	11.69	9.20	12.51	13.06	14.29	14.42
COMPLIANT/ RESISTANT	15.11	15.68	21.39	13.41	13.29	13.55	9.28	19.18	13.48	16.32
IMMATURE	26.17	13.55	19.87	25.89	11.93	18.75	21.70	13.23	23.29	21.94

## Appendix A.4. Reliability Analysis (Cronbach's Alpha) Summary Statistics

Summary Statistics Mode by Mode FORM A (See notes on page 2)

CRITICISING MODE	Item Number	Item Mean	Item St. Dev.	Alpha if Item Deleted
	ALPHA 0.6125	Q2	2.34	1.14
Q5		3.44	1.40	.6068
Q9		2.85	1.46	.5604
Q18		1.83	1.10	.5960
Q21		3.64	1.12	.5804
Q24		3.21	1.32	.5882
Q63		4.40	1.10	.5984
Q78		3.22	1.23	.5904
Q86		3.67	1.23	.5816
Q93		2.79	1.34	.6367
Q100		2.97	1.40	.5676
Q102		2.53	1.12	.5823
MARSH/ MALLOWING MODE	Item Number	Item Mean	Item St. Dev.	Alpha if Item Deleted
	ALPHA 0.6454	Q37	2.00	0.93
Q38		2.96	1.32	.6360
Q43		2.77	1.10	.6428
Q46		1.63	0.91	.6326
Q51		3.42	1.52	.6222
Q58		3.71	1.48	.6267
Q61		2.32	1.23	.6208
Q70		2.54	1.23	.5949
Q84		3.23	1.18	.6328
Q90		2.80	1.27	.6251
Q92		4.24	1.22	.6429
Q95		3.23	1.48	.5937
STRUCTURING MODE	Item Number	Item Mean	Item St. Dev.	Alpha if Item Deleted
	ALPHA 0.5885	Q8	4.51	1.17
Q29		5.20	0.99	.5263
Q34		5.05	1.02	.5494
Q36		4.38	1.35	.5491
Q47		3.95	1.42	.6067
Q48		5.24	0.82	.5619
Q68		5.37	0.94	.5927
Q73		5.07	0.64	.5729
Q75		4.86	0.99	.5407
Q83		4.83	1.17	.5389
Q81		5.24	0.72	.5619
Q65		4.16	1.45	.6251
NURTURING MODE	Item Number	Item Mean	Item St. Dev.	Alpha if Item Deleted
	ALPHA 0.5912	Q13	4.81	1.14
Q25		5.11	0.72	.5819
Q30		5.61	0.80	.5603
Q45		4.81	1.05	.6087
Q54		4.64	0.96	.5758
Q59		4.57	1.49	.5840
Q64		5.31	0.70	.5772
Q69		4.20	1.54	.5486
Q87		5.41	0.61	.5655
Q88		5.25	0.68	.5752
Q94		5.51	0.67	.5570
Q104		3.98	1.60	.5302



## Appendix A.4. Reliability Analysis (continued)

### Summary Statistics Mode by Mode FORM A

ACCOUNTING MODE	Item Number	Item Mean	Item St. Dev.	Alpha if Item Deleted
<b>ALPHA 0.5818</b>	Q15	4.93	1.34	.5880
	Q26	5.19	0.71	.5603
	Q32	3.54	1.51	.5723
	Q39	4.48	1.45	.5400
	Q42	4.49	1.29	.5221
	Q55	4.80	1.06	.5590
	Q57	4.86	1.18	.5523
	Q62	4.72	1.01	.6026
	Q66	5.33	0.65	.5788
	Q67	4.94	1.16	.5527
	Q89	2.94	1.71	.5311
	Q96	4.07	1.30	.5514

### Reminder Notes

(N.B. these matters are all dealt with in the main text)

#### ALPHA

The reliability coefficient in this study should be greater than 0.5 to show reasonable reliability, given that each Mode included a diversity of aspects to be tested, and it was a theoretical rather than merely a statistical coherence that was being sought.

#### ITEM MEAN

This shows any disproportionate response frequency. Either high or low figures may indicate item problems such as response bias or obviousness of response invited.  
(Negative Modes' high mean and positive Modes' low mean may be not OK).

#### ITEM STANDARD DEVIATION

Disproportionate variability of response may indicate questionable usefulness of item.

#### ALPHA IF ITEM DELETED

If the reliability rises when item is removed, it indicates that the item was adversely affecting reliability of the construct.

## Appendix A.4. Reliability Analysis (continued)

### Summary Statistics Made by Mode FORM A

COOPERATIVE MODE	Item Number	Item Mean	Item St. Dev.	Alpha if Item Deleted
	ALPHA 0.5961	Q7	5.16	0.78
Q12		3.46	1.62	.5811
Q16		4.13	1.24	.5769
Q22		5.16	1.10	.5824
Q23		5.36	0.65	.5490
Q31		3.41	1.48	.5475
Q35		5.11	0.91	.5948
Q50		4.74	1.29	.5681
Q60		5.37	0.88	.5729
Q74		5.42	0.56	.5823
Q98		4.99	1.08	.5709
Q101	4.26	1.26	.6017	
SPONTANEOUS MODE	Item Number	Item Mean	Item St. Dev.	Alpha if Item Deleted
ALPHA 0.6270	Q3	3.96	1.41	.5913
	Q4	4.74	0.95	.6147
	Q14	4.53	1.19	.6254
	Q17	4.76	1.28	.5650
	Q20	4.48	1.48	.6378
	Q19	3.61	1.61	.6067
	Q28	4.68	1.17	.6138
	Q52	4.67	1.40	.6062
	Q72	4.63	1.10	.6148
	Q76	3.90	1.69	.5538
	Q103	4.80	1.26	.6216
Q105	5.20	0.84	.6106	
COMPLIANT/ RESISTANT MODE	Item Number	Item Mean	Item St. Dev.	Alpha if Item Deleted
ALPHA 0.4077	Q6	2.80	1.39	.3720
	Q11	2.62	1.34	.3607
	Q27	2.80	1.41	.4007
	Q33	2.66	1.51	.4173
	Q44	3.25	1.38	.3249
	Q49	2.53	1.24	.3565
	Q56	3.88	1.17	.3782
	Q71	4.43	1.39	.3972
	Q80	2.86	1.42	.3769
	Q85	2.31	1.20	.3823
Q82	4.47	1.02	.4173	
Q108	2.35	1.51	.4445	
IMMATURE MODE	Item Number	Item Mean	Item St. Dev.	Alpha if Item Deleted
ALPHA 0.5748	Q1	2.42	1.25	.5780
	Q10	2.34	1.16	.5615
	Q40	3.16	1.44	.5173
	Q41	2.86	1.10	.5351
	Q53	2.63	1.38	.5369
	Q77	2.09	1.02	.5673
	Q79	2.88	1.35	.5432
	Q91	4.67	1.17	.6192
	Q97	1.67	1.20	.5551
	Q99	2.21	1.11	.5537
	Q106	2.13	1.35	.5060
Q107	1.92	1.23	.5463	

## Appendix A.4. Reliability Analysis (continued)

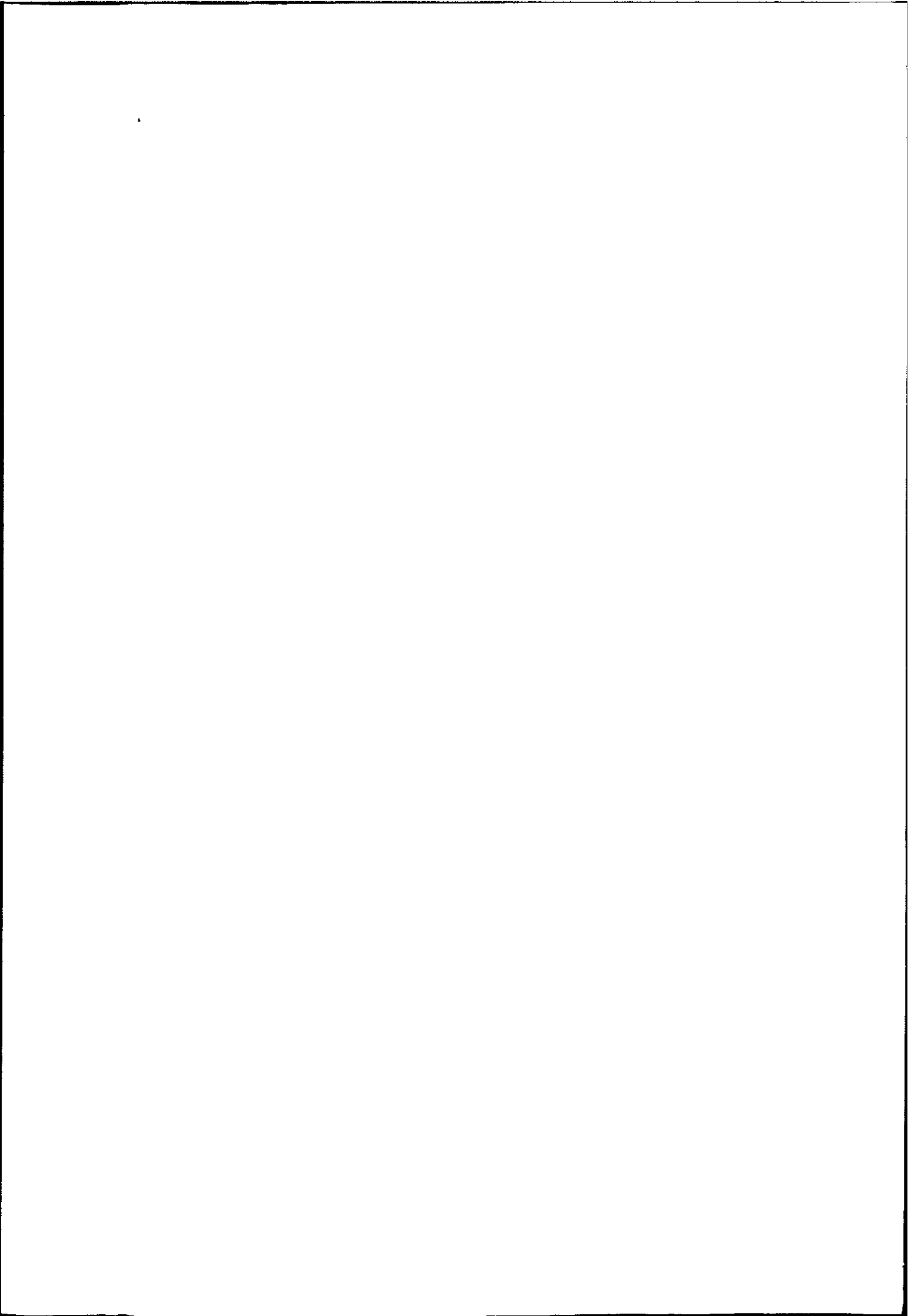
### Summary Statistics Mode by Mode FORM B

CRITICISING MODE	Item Number	Item Mean	Item St. Dev.	Alpha if Item Deleted
	ALPHA 0.7297	Q2	3.62	1.25
Q5		3.89	1.24	<b>.7375</b>
Q9		2.64	1.63	.7051
Q18		2.62	1.50	.7021
Q21		3.84	1.58	.7206
Q24		3.51	1.30	.7032
Q63		2.65	1.19	.6858
Q78		<b>4.19</b>	1.11	.7177
Q86		2.98	1.09	.7086
Q93		<b>2.01</b>	1.11	.7143
Q100		3.08	1.43	.7308
Q102		2.46	1.15	.7177
MARSH/ MALLOWING MODE	Item Number	Item Mean	Item St. Dev.	Alpha if Item Deleted
	ALPHA 0.6051	Q37	3.67	1.20
Q38		3.55	1.36	.5743
Q43		<b>2.78</b>	1.54	.5210
Q46		2.52	1.27	.5893
Q51		3.10	1.23	.5748
Q58		<b>3.72</b>	1.35	.5857
Q61		2.42	1.21	.5924
Q70		3.61	1.55	<b>.6236</b>
Q84		3.61	1.56	.6202
Q90		3.15	<b>1.58</b>	.5522
Q92		3.09	1.34	.5831
Q95		2.43	1.21	.5545
STRUCTURING MODE	Item Number	Item Mean	Item St. Dev.	Alpha if Item Deleted
	ALPHA 0.6101	Q8	5.11	0.85
Q29		4.35	1.10	.5672
Q34		5.40	0.88	.5831
Q36		<b>3.76</b>	1.46	.5997
Q47		4.54	1.17	<b>.6241</b>
Q48		4.90	0.85	.5793
Q68		4.93	0.77	.5747
Q73		5.07	0.87	.5828
Q75		4.98	1.21	.6008
Q83		5.04	0.71	.5716
Q81		4.82	1.10	<b>.6027</b>
Q65		5.24	0.75	.5853
NURTURING MODE	Item Number	Item Mean	Item St. Dev.	Alpha if Item Deleted
	ALPHA 0.6862	Q13	4.34	1.28
Q25		4.89	1.11	.6795
Q30		<b>5.31</b>	0.83	.6667
Q45		4.82	1.02	.6731
Q54		<b>4.18</b>	<b>1.43</b>	<b>.6814</b>
Q59		<b>5.41</b>	0.72	.6700
Q64		4.80	0.91	.6557
Q69		4.91	1.30	.6408
Q87		5.30	0.68	.6400
Q88		4.99	0.76	.6488
Q94		5.05	0.83	.6568
Q104		5.06	0.91	.6585

### Appendix A.4. Reliability Analysis (continued)

Summary Statistics Mode by Mode FORM B

ACCOUNTING MODE	Item Number	Item Mean	Item St. Dev.	Alpha if Item Deleted
ALPHA 0.5075	Q15	5.02	0.80	.5096
	Q26	3.74	1.43	.5356
	Q32	5.32	0.75	.4873
	Q39	4.42	1.17	.4428
	Q42	4.58	0.99	.4707
	Q55	4.90	0.97	.4875
	Q57	4.58	1.01	.4579
	Q62	4.51	1.30	.5164
	Q66	5.05	0.97	.4942
	Q67	4.32	1.35	.4924
	Q89	4.75	1.32	.4238
	Q96	3.62	1.72	.4956



## Appendix A.4. Reliability Analysis (continued)

### Summary Statistics Mode by Mode FORM B

<b>COOPERATIVE MODE</b>  <b>ALPHA 0.6248</b>	<b>Item Number</b>	<b>Item Mean</b>	<b>Item St. Dev.</b>	<b>Alpha if Item Deleted</b>
	Q7	4.79	1.02	.6308
	Q12	4.94	0.85	.5893
	Q16	4.84	1.09	.5893
	Q22	5.61	0.61	.5977
	Q23	5.30	0.76	.5889
	Q31	4.84	0.96	.6131
	Q35	4.86	1.14	.6059
	Q50	5.30	0.73	.6074
	Q60	4.87	1.24	.5990
	Q74	5.04	1.13	.6229
Q98	3.92	1.38	.5930	
Q101	5.22	0.81	.6087	
<b>SPONTANEOUS MODE</b>  <b>ALPHA 0.6523</b>	<b>Item Number</b>	<b>Item Mean</b>	<b>Item St. Dev.</b>	<b>Alpha if Item Deleted</b>
	Q3	4.62	0.99	.6407
	Q4	2.48	1.47	.6068
	Q14	5.34	0.69	.6411
	Q17	4.22	1.16	.5995
	Q20	3.19	1.77	.6728
	Q19	3.72	1.71	.6183
	Q28	3.50	1.63	.6073
	Q52	4.96	1.17	.6318
	Q72	3.84	1.43	.6376
	Q76	4.71	1.03	.6486
Q103	3.92	1.73	.6575	
Q105	4.74	1.21	.6148	
<b>COMPLIANT/ RESISTANT MODE</b>  <b>ALPHA 0.4836</b>	<b>Item Number</b>	<b>Item Mean</b>	<b>Item St. Dev.</b>	<b>Alpha if Item Deleted</b>
	Q6	2.73	1.47	.4237
	Q11	3.04	1.39	.4457
	Q27	2.61	1.41	.4067
	Q33	2.99	1.61	.5015
	Q44	2.87	1.31	.4964
	Q49	3.03	1.14	.4955
	Q56	3.90	1.25	.4806
	Q71	3.61	1.60	.4291
	Q80	3.94	1.05	.4619
	Q85	2.16	1.25	.4601
Q82	2.21	1.29	.4891	
Q108	3.90	1.45	.4315	
<b>IMMATURE MODE</b>  <b>ALPHA 0.6628</b>	<b>Item Number</b>	<b>Item Mean</b>	<b>Item St. Dev.</b>	<b>Alpha if Item Deleted</b>
	Q1	3.90	1.49	.6779
	Q10	1.46	0.89	.6345
	Q40	3.30	1.51	.6488
	Q41	2.49	1.11	.6460
	Q53	1.85	1.14	.6116
	Q77	2.08	1.08	.6296
	Q79	2.87	1.49	.6502
	Q91	3.18	1.37	.6296
	Q97	1.99	1.46	.6573
	Q99	2.67	1.21	.6284
Q106	2.69	1.57	.6470	
Q107	2.94	1.67	.6522	

## Appendix A.5.1. Exploratory Test-Retest Study No. 1

### Site 13 "Lilly"

CASES	01	02	03	04	05	07	F17	F19	
FFI 1	2.42	2.64	2.58	2.19	3.90	2.34	3.54	4.13	
FFI 2	2.51	2.56	2.34	2.25	3.15	2.45	3.28	3.92	
PARENT RATIO 1	1.72	1.95	1.93	1.46	2.87	1.45	2.25	2.94	
PARENT RATIO 2	1.92	1.97	2.12	1.94	2.31	1.80	2.62	2.64	
CHILD RATIO 1	1.67	1.72	1.68	1.62	2.61	1.73	2.41	2.55	
CHILD RATIO 2	1.71	1.68	1.36	1.32	2.10	1.43	1.87	2.57	
CONTROL RATIO 1	1.53	2.16	2.39	1.43	3.53	1.41	1.78	2.43	
CONTROL RATIO 2	1.37	2.11	1.77	1.69	2.58	1.85	2.68	1.76	
CARE RATIO 1	1.97	1.79	1.62	1.49	2.43	1.49	3.16	3.89	
CARE RATIO 2	2.95	1.84	2.50	2.27	2.07	1.74	2.55	5.00	
SOCIALISED CHILD RATIO 1	1.67	1.65	1.79	1.79	2.68	1.62	1.81	2.78	
SOCIALISED CHILD RATIO 2	1.63	1.67	1.28	1.34	2.24	1.32	1.97	2.48	
NATURAL CHILD RATIO 1	1.67	1.79	1.55	1.47	2.52	1.89	3.35	2.29	
NATURAL CHILD RATIO 2	1.78	1.69	1.46	1.30	1.96	1.58	1.78	2.67	

RESULTS

Measure	Control	Experimental	F(1, 10)	p	Control	Experimental	F(1, 10)	p
Parent Ratio 1	1.92	1.87	2.12	.164	1.81	1.80	0.00	.958
Parent Ratio 2	1.92	1.87	2.12	.164	1.81	1.80	0.00	.958
Child Ratio 1	1.71	1.68	1.22	.328	1.63	1.63	0.00	.958
Child Ratio 2	1.71	1.68	1.22	.328	1.63	1.63	0.00	.958
Control Ratio 1	1.97	1.77	1.77	.198	1.89	1.88	0.00	.958
Control Ratio 2	1.97	1.77	1.77	.198	1.89	1.88	0.00	.958
Child Care Ratio 1	2.82	1.84	2.82	.107	1.84	1.84	0.00	.958
Child Care Ratio 2	2.82	1.84	2.82	.107	1.84	1.84	0.00	.958
Second-Grade Child Ratio 1	1.59	1.57	1.21	.331	1.58	1.58	0.00	.958
Second-Grade Child Ratio 2	1.59	1.57	1.21	.331	1.58	1.58	0.00	.958
Natural Child Ratio 1	1.79	1.69	1.52	.229	1.69	1.69	0.00	.958
Natural Child Ratio 2	1.79	1.69	1.52	.229	1.69	1.69	0.00	.958



## Appendix A.5.2. Exploratory Test-Retest Study No. 2

### Site 3 "Bob"

CASES	01	05	13	14	16	17	19	F01	F03
FFI 1	2.24	3.11	2.22	2.16	2.28	2.47	2.22	3.29	2.81
FFI 2	3.20	4.13	2.50	2.26	2.96	2.31	2.01	3.97	2.83
PARENT RATIO 1	1.39	2.08	1.49	1.41	1.86	1.84	1.63	2.10	1.95
PARENT RATIO 2	1.92	2.39	1.56	1.55	2.02	1.39	1.59	2.77	1.83
CHILD RATIO 1	1.68	2.04	1.59	1.51	1.40	1.64	1.34	2.44	1.87
CHILD RATIO 2	2.48	3.43	1.84	1.46	2.09	1.81	1.26	2.81	2.04
CONTROL RATIO 1	1.46	1.88	1.49	1.28	1.52	1.59	1.30	2.06	1.56
CONTROL RATIO 2	2.18	2.20	1.72	1.53	1.97	1.48	1.49	2.54	1.53
CARE RATIO 1	1.33	2.30	1.49	1.56	2.32	2.19	2.23	2.14	2.61
CARE RATIO 2	1.71	2.62	1.43	1.57	2.07	1.31	1.70	3.05	2.30
SOCIALISED CHILD RATIO 1	1.91	1.82	1.45	1.71	1.62	1.49	1.64	2.41	2.00
SOCIALISED CHILD RATIO 2	2.58	3.47	1.85	1.58	1.88	2.00	1.51	3.45	2.04
NATURAL CHILD RATIO 1	1.45	2.42	1.76	1.33	1.20	1.82	1.11	2.48	1.76
NATURAL CHILD RATIO 2	2.36	3.38	1.84	1.34	2.41	1.61	1.05	2.33	2.03



### Appendix A.5.3. Exploratory Test-Retest Study No. 3

#### Site 20 "Tessa"

CASES	01	03	05	07	09	12	13	F14	F15
FFI 1	2.36	2.69	2.69	2.68	2.34	1.99	3.17	2.25	2.62
FFI 2	2.16	3.12	2.29	2.76	2.19	1.88	2.73	2.34	2.52
PARENT RATIO 1	1.56	1.85	1.77	1.78	1.38	1.49	2.14	1.56	1.67
PARENT RATIO 2	1.45	1.96	1.77	2.16	1.98	1.0	1.93	1.69	1.68
CHILD RATIO 1	1.63	1.88	1.41	1.85	1.95	1.25	2.30	1.69	1.78
CHILD RATIO 2	1.37	2.42	1.25	1.86	1.19	1.15	1.91	1.61	1.70
CONTROL RATIO 1	1.50	1.94	1.32	1.50	1.38	1.33	2.64	1.64	1.85
CONTROL RATIO 2	1.42	2.56	2.36	2.27	2.33	1.92	2.42	1.67	1.72
CARE RATIO 1	1.61	1.77	2.52	2.11	1.38	1.65	1.84	1.49	1.52
CARE RATIO 2	1.49	1.58	1.45	2.07	1.75	1.26	1.63	1.71	1.64
SOCIALISED CHILD RATIO 1	1.42	1.51	1.33	1.69	1.88	1.02	2.03	1.79	1.76
SOCIALISED CHILD RATIO 2	1.44	1.63	1.06	1.81	1.13	1.04	1.77	2.00	1.91
NATURAL CHILD RATIO 1	1.93	2.48	1.55	2.08	2.04	1.56	2.75	1.61	1.81
NATURAL CHILD RATIO 2	1.29	4.53	1.71	1.90	1.28	1.31	2.12	1.30	1.46

TABLE 1. - SUMMARY OF DATA FOR 1964

STATE	1964				1963			
	NO. OF CHILDREN	NO. OF PLACES	AVERAGE PERCENTAGE OF CHILDREN	PERCENTAGE OF PLACES	NO. OF CHILDREN	NO. OF PLACES	AVERAGE PERCENTAGE OF CHILDREN	PERCENTAGE OF PLACES
ALABAMA	1,100	1,100	100	100	1,100	1,100	100	100
ALASKA	10	10	100	100	10	10	100	100
ARIZONA	1,000	1,000	100	100	1,000	1,000	100	100
ARKANSAS	1,000	1,000	100	100	1,000	1,000	100	100
CALIFORNIA	1,000	1,000	100	100	1,000	1,000	100	100
COLORADO	1,000	1,000	100	100	1,000	1,000	100	100
CONNECTICUT	1,000	1,000	100	100	1,000	1,000	100	100
DELAWARE	1,000	1,000	100	100	1,000	1,000	100	100
FLORIDA	1,000	1,000	100	100	1,000	1,000	100	100
GEORGIA	1,000	1,000	100	100	1,000	1,000	100	100
IDAHO	1,000	1,000	100	100	1,000	1,000	100	100
ILLINOIS	1,000	1,000	100	100	1,000	1,000	100	100
INDIANA	1,000	1,000	100	100	1,000	1,000	100	100
IOWA	1,000	1,000	100	100	1,000	1,000	100	100
KANSAS	1,000	1,000	100	100	1,000	1,000	100	100
KENTUCKY	1,000	1,000	100	100	1,000	1,000	100	100
Louisiana	1,000	1,000	100	100	1,000	1,000	100	100
MAINE	1,000	1,000	100	100	1,000	1,000	100	100
MARYLAND	1,000	1,000	100	100	1,000	1,000	100	100
MASSACHUSETTS	1,000	1,000	100	100	1,000	1,000	100	100
MICHIGAN	1,000	1,000	100	100	1,000	1,000	100	100
MINNESOTA	1,000	1,000	100	100	1,000	1,000	100	100
MISSISSIPPI	1,000	1,000	100	100	1,000	1,000	100	100
MISSOURI	1,000	1,000	100	100	1,000	1,000	100	100
MONTANA	1,000	1,000	100	100	1,000	1,000	100	100
NEBRASKA	1,000	1,000	100	100	1,000	1,000	100	100
NEVADA	1,000	1,000	100	100	1,000	1,000	100	100
NEW HAMPSHIRE	1,000	1,000	100	100	1,000	1,000	100	100
NEW JERSEY	1,000	1,000	100	100	1,000	1,000	100	100
NEW MEXICO	1,000	1,000	100	100	1,000	1,000	100	100
NEW YORK	1,000	1,000	100	100	1,000	1,000	100	100
NORTH CAROLINA	1,000	1,000	100	100	1,000	1,000	100	100
NORTH DAKOTA	1,000	1,000	100	100	1,000	1,000	100	100
OHIO	1,000	1,000	100	100	1,000	1,000	100	100
OKLAHOMA	1,000	1,000	100	100	1,000	1,000	100	100
OREGON	1,000	1,000	100	100	1,000	1,000	100	100
PENNSYLVANIA	1,000	1,000	100	100	1,000	1,000	100	100
RHODE ISLAND	1,000	1,000	100	100	1,000	1,000	100	100
SOUTH CAROLINA	1,000	1,000	100	100	1,000	1,000	100	100
SOUTH DAKOTA	1,000	1,000	100	100	1,000	1,000	100	100
TENNESSEE	1,000	1,000	100	100	1,000	1,000	100	100
TEXAS	1,000	1,000	100	100	1,000	1,000	100	100
UTAH	1,000	1,000	100	100	1,000	1,000	100	100
Vermont	1,000	1,000	100	100	1,000	1,000	100	100
VIRGINIA	1,000	1,000	100	100	1,000	1,000	100	100
WASHINGTON	1,000	1,000	100	100	1,000	1,000	100	100
WEST VIRGINIA	1,000	1,000	100	100	1,000	1,000	100	100
WISCONSIN	1,000	1,000	100	100	1,000	1,000	100	100
WYOMING	1,000	1,000	100	100	1,000	1,000	100	100

### Appendix A.5.4. Exploratory Test-Retest Study No. 4

#### Site 10 "Larry"

CASES	02	04	05	06	08	10	11	12	13
FFI 1	2.06	2.88	3.71	2.90	2.51	3.19	2.37	2.11	2.89
FFI 2	2.12	3.02	3.97	3.22	2.87	5.32	2.55	2.29	3.02
PARENT RATIO 1	1.20	1.86	2.19	2.05	1.92	2.00	1.36	1.32	1.79
PARENT RATIO 2	1.30	1.98	2.41	2.28	1.94	3.73	1.36	1.36	1.89
CHILD RATIO 1	1.58	1.91	3.21	1.97	1.43	2.54	1.90	1.39	2.05
CHILD RATIO 2	1.45	2.02	3.18	2.20	1.95	3.23	2.42	1.62	2.21
CONTROL RATIO 1	1.41	1.97	2.06	1.86	2.18	1.80	1.43	1.26	1.69
CONTROL RATIO 2	1.21	1.62	2.22	2.03	1.87	3.00	1.40	1.20	2.00
CARE RATIO 1	1.20	1.78	2.34	2.26	1.71	2.25	1.29	1.38	1.91
CARE RATIO 2	1.38	2.46	2.65	2.58	2.00	4.80	1.33	1.55	1.79
SOCIALISED CHILD RATIO 1	1.47	1.42	2.46	1.69	1.15	2.19	1.62	1.38	1.76
SOCIALISED CHILD RATIO 2	1.27	1.49	2.18	2.12	1.43	3.00	2.52	1.66	1.75
NATURAL CHILD RATIO 1	1.71	2.67	4.50	2.30	1.80	2.95	2.27	1.40	2.46
NATURAL CHILD RATIO 2	1.70	3.00	5.50	2.29	2.95	3.50	2.30	1.59	2.90



**Appendix A.6.**  
**Factor Analysis Form A Component 1**

**Main Modes Represented**

<b>STRUCTURING</b>			
helpful	1	34	Would you offer to look after the neighbour's house while they are away?
helpful	2	83	Would you offer to look after the children as a way to enable someone to attend their training course?
inspiring	1	8	Would you talk passionately about your hobby to young people, so they'd want to have a go at it?
<b>NURTURING</b>			
compassionate	1	13	Would you stay with the miserable and howling children till they were comforted?
compassionate	2	45	Would you allow the person as much time off work as needed after their mother's death?
cherishing	2	104	Would you warm the beds ready for visitors?
empathic	1	54	Would you guess rightly that the brash new employee is actually very nervous?
<b>COOPERATIVE</b>			
friendly	1	23	Would you usually greet others warmly?
friendly	2	98	Would you wave back to the people on the passing steamer?
sociable	2	50	Would you invite friends and neighbours round for a cup of tea and a chat?
<b>SPONTANEOUS</b>			
imaginative	1	3	Would you see fantastic pictures gazing at clouds?
expressive	2	105	When your friend appears in the doorway would your face light up with pleasure?
curious	2	52	Would you leave the footpath to explore the cave in the side of the hill?

**Subsidiary Modes**

<b>MARSH/ MALLOWING</b>			
self-denying	1	58	Might you give up your holiday to pay for driving lessons for your teenager?
self-denying	2	92	Even though you're tired out and it's time to leave work, might you listen on and on to a chatty colleague?

**Modes NEGATIVELY correlated**

<b>CRITICISING</b>			
dominating	2	86	Would you push through an agreement to do things the way you think best?

**THEME**

**"Warm Lively Friend"**

**Description**

This is a kindly, warm, open, lively and responsive pattern – doing the utmost for the comfort and convenience of others, enjoying their company and tuning in to their needs, possibly to the extent of not drawing limits for their own sake and becoming somewhat self-sacrificing.

**Appendix A.6.**  
**Factor Analysis Form A Component A2**

**Main Modes Represented**

<b>STRUCTURING</b>			
helpful	1	34	Would you offer to look after the neighbour's house while they're away?
authoritative	1	36	If you witnessed a mugging, would you take charge and order the attacker to stop?
authoritative	2	75	Would you be the one to take the decision to evacuate the building in an emergency?
directive	1	29	would you tell the crowds to stand back so the doctor could reach the scene of the accident?
<b>SPONTANEOUS</b>			
ingenious	2	103	Would you rig up a raft out of scraps to escape from shipwreck?
curious	2	52	Would you leave the footpath to explore the cave in the side of the hill?
creative	1	4	When facing a sticky problem would you tackle it with some lateral thinking?
<b>ACCOUNTING</b>			
alert	2	57	Would you notice a change in the sound of the car engine?
grounded	1	55	Although upset by the accident, would you remember to take witnesses' names and addresses.

**Subsidiary Modes**

<b>CRITICISING</b>			
punitive	1	9	Might you think it a good idea for someone to suffer for what they've done wrong to teach them a lesson?
<b>MARSH/ MALLOWING</b>			
smothering	2	90	Would you make decisions for others to save them the trouble?
<b>NURTURING</b>			
protective	2	59	Would you have your medicine cupboard fitted with childproof locks?

**Modes NEGATIVELY correlated**

<b>COMPLIANT/ RESISTANT</b>			
submissive	1	44	Would you take some unfair criticism, assuming the person must be right?

**THEME**

**"Resourceful" (Leader)**

**Description**

This is a decisive, powerful and resourceful pattern – strong in emergencies, finding solutions with bright ideas, taking charge and helping out to the point of being rather pushy and tough.



**Appendix A.6.**  
**Factor Analysis Form A Component A3**

**Main Modes Represented**

<b>SPONTANEOUS</b>			
imaginative	1	3	Would you see fantastic pictures gazing at clouds?
creative	2	19	Would you improvise new verses to an old song?
zestful	1	17	Would you run right along the beach splashing in the waves?
<b>COMPLIANT/ RESISTANT</b>			
rebellious	1	11	Would you find a way not to comply with the dress requirements for the occasion?
rebellious	2	49	Would you be inclined to break rules as a matter of course?
defiant	1	33	Although forbidden, would you carry on whistling?
defiant	2	85	If the boss says everyone must stay on till 5.30, would you still leave at 5.10?
<b>IMMATURE</b>			
reckless	1	40	would you go through the traffic lights as they turn red?
reckless	2	97	would you go rock climbing without the necessary equipment?
unorganised	1	106	Might you still be in the bath when the guests arrive for dinner?

**Subsidiary Modes**

<b>ACCOUNTING</b>			
aware	2	62	If you were performing, would you register the shifting moods of the audience?

**Modes NEGATIVELY correlated**

<b>STRUCTURING</b>			
firm	1	48	Would you stand by your commitment to the safety rules?

**THEME**

**“To Hell with You!” – (Anti-authority/risk-taking)**

**Description**

This is an undisciplined, risk-taking pattern – disregarding instructions and precautions for the sake of self-gratification. Creativity and energy lack boundaries and noticing of others has an egocentric motive. (Excluded Parent)

**Appendix A.6.**  
**Factor Analysis Form A Component A4**

**Main Modes Represented**

<b>STRUCTURING</b>			
inspiring	2	81	Would you give someone the boost they need to get started on their long-desired project?
directive	2	73	Would you give clear instructions about what to do?
<b>NURTURING</b>			
encouraging	1	87	Would you comment appreciatively on the good things the others are doing
understanding	1	25	Would you recognise what makes things difficult for people sometimes?
understanding	2	88	would you allow your new colleague more time to complete the project as part of settling in?
<b>COOPERATIVE</b>			
considerate	2	74	Would you move up a seat so that two friends can sit together?
sociable	1	16	Would you choose to be with other people most of the time?
sociable	2	50	Would you invite friends and neighbours round for a cup of tea and a chat?
adaptable	1	35	Would you change plans and agree to work late tonight and have tomorrow morning off?
adaptable	2	60	Would you happily eat a different sort of breakfast when staying with friends?
<b>SPONTANEOUS</b>			
expressive	2	105	When your friend appears in the doorway would your face light up with pleasure?
imaginative	2	72	Would you visualise a dramatic end to the story?

**Subsidiary Modes**

<b>ACCOUNTING</b>			
aware	2	62	If you were performing, would you register the shifting moods of the audience?
<b>COMPLIANT/ RESISTANT</b>			
anxious	1	71	Would you get very tensed up waiting for the exam results?
<b>IMMATURE</b>			
infantile	2	91	Would you want someone to give you a comforting warm drink to help you recover from a traumatic event?

**Modes NEGATIVELY correlated**

<b>CRITICISING</b>			
dominating	1	2	Would you impose your own ideas on a group without consulting them?
<b>STRUCTURING</b>			
consistent	1	47	Would you refuse all applications after the deadline as you said you would?
<b>IMMATURE</b>			
selfish	1	10	Might you drive off after the event without offering anyone a lift to the station?

**THEME**

**"Best Mate",- (Heart of gold)**

**Description**

This is a warm, kind and friendly pattern – both easy-going and amenable and also energising and empowering for others. There is a possible vulnerability in the openness to ideas and moods?

**Appendix A.6.  
Factor Analysis Form A Component A5**

**Main Modes Represented**

<b>CRITICISING</b>			
dominating	1	2	Would you impose your own ideas on a group without consulting them?
dominating	2	86	Would you push through an agreement to do things the way you think best?
blaming	1	24	Would you protest that you couldn't finish the job because of lack of support from others?
blaming	2	63	Would you give yourself a hard time for failing to solve a problem?
judgmental	2	100	Would you be tempted to call someone who repeatedly forgot things "hopeless"?
punitive	1	9	Might you think it a good idea for someone to suffer for what they've done wrong, to teach them a lesson?
<b>IMMATURE</b>			
reckless	1	40	Would you go through the traffic lights as they turn red?
unorganised	1	106	Might you still be in the bath when the guests arrive on time for dinner?
infantile	1	1	After a disagreement, might you stomp out of the room and slam the door?
egocentric	1	41	Would you tend to keep turning the conversation back to yourself?
inconsiderate	1	53	Would you change the TV channel without asking the others?
selfish	2	79	Might you keep the goodies hidden till other people have gone?

**Subsidiary Modes**

<b>MARSH/ MALLOWING</b>			
smothering	1	43	When your friends are asked a question might you answer for them?
smothering	2	90	Would you make decisions for other people to save them the trouble?
<b>SPONTANEOUS</b>			
curious	1	14	Would you peep behind the door to see what's there?
<b>COMPLIANT/ RESISTANT</b>			
placating	1	56	Would you make excuses for your action to someone who appears critical?

**Modes NEGATIVELY correlated**

**NONE**

<b>THEME</b> <b>"Selfish Blamer"</b>
<b>Description</b> This is a self-centred, irresponsible and blaming pattern – wanting own way regardless of others' wants or likes, and this lack of respect or valuing of people expressed in hostility and vengeful attitudes.

**Appendix A.6.  
Factor Analysis Form A Component A6**

**Main Modes Represented**

<b>COOPERATIVE</b>			
<b>confident</b>	1	12	Would you find it easy to get up and speak to a large gathering of people?
<b>confident</b>	2	31	Would you walk into the room at a party and join a group you don't know?
<b>assertive</b>	1	7	Would you negotiate openly and directly for a fair solution?
<b>adaptable</b>	2	60	Would you happily eat a different sort of breakfast when staying with friends?

**Subsidiary Modes**

<b>STRUCTURING</b>			
<b>directive</b>	1	29	Would you tell the crowds to stand back so the doctor could reach the scene of the accident?
<b>SPONTANEOUS</b>			
<b>zestful</b>	2	28	Would you reenergise the long meeting with a bit of fun?

**Modes NEGATIVELY correlated**

<b>CRITICISING</b>			
<b>judgmental</b>	1	18	Would you mark the children's pictures out of 10 to see who's done the best?
<b>MARSH/ MALLOWING</b>			
<b>over-protective</b>	1	46	Would you refuse to let the children enter the swimming gala in case they drown?
<b>over-protective</b>	2	61	Would you put your children to bed if they had a bout of sneezing to be on the safe side?
<b>COMPLIANT/ RESISTANT</b>			
<b>inhibited</b>	1	6	Would you stay silent in the group in case you might say the wrong thing?
<b>inhibited</b>	2	27	Would you hesitate to join the queue for 2 <sup>nd</sup> helpings, even though you'd like to?

**THEME**

**"Get on with it, - Action!"**

**Description**

This is an energetic, outspoken, initiative-taking profile – willing to get up and have a go, take charge if necessary, meet people and fit in well, not in a pushy way or to deter others from also doing their own thing.

**Appendix A.6.  
Factor Analysis Form A Component A7**

**Main Modes Represented**

<b>STRUCTURING</b>			
firm	1	48	Would you stand by your commitment to the safety rules?
directive	2	73	Would you give clear instructions about what to do?
consistent	1	47	Would you refuse all applications after the deadline as you said you would?
<b>NURTURING</b>			
encouraging	2	94	Would you stay alongside the child learning to ride the bike, helping their confidence to grow?
protective	1	30	Would you make sure to provide life jackets for canoeing down the river?
<b>ACCOUNTING</b>			
grounded	2	67	Even though very excited about your surprise holiday, would you still do the essential packing effectively?
rational	1	26	Would you generally have a reason for your actions?
rational	2	66	Would you seek an explanation to make sense of the conflicting messages?
precise	1	89	Would you weigh the suitcases to ensure they meet the airline baggage limits?
precise	2	96	Would you write detailed explanations showing exactly what to do?
evaluative	1	39	Would you make notes about the houses for sale and compare them to help you choose?
evaluative	2	42	Would you gather as many facts as possible before deciding which car to buy?

**Subsidiary Modes**

<b>CRITICISING</b>			
bossy	1	5	Would you insist on how the room is to be arranged?
<b>SPONTANEOUS</b>			
expressive	1	20	At the sad farewell would you let yourself cry?

**Modes NEGATIVELY correlated**

<b>IMMATURE</b>			
unorganised	2	107	Might you organise an outing without confirming the necessary transport?
reckless	2	97	Would you go rock climbing without the necessary equipment?

**THEME**

**“Responsibility-Taker”, - (Solid citizen)**

**Description**

This is an exact, careful and reasonable pattern – thinking ahead, well-prepared and a stickler for doing things according to the rules in a well organised way. Others would know where they stood and be able to rely on this sort of person and feel supported although also somewhat dominated maybe.

**Appendix A.6.  
Factor Analysis Form A Component A8**

**Main Modes Represented**

<b>MARSH/ MALLOWING</b>			
over-protective	1	46	Would you refuse to let the children enter the swimming gala in case they drown?
self-denying	1	58	Might you give up your holiday to pay for driving lessons for your teenager?
smothering	2	90	Would you make decisions for other people to save them the trouble?
inconsistent	1	70	Might you say no one minute and yes the next to the children's repeated request?
inconsistent	2	84	Would you be inclined to say "I know I said you mustn't, but just this once...."?
overindulgent	1	37	Would you usually allow the children to stay up as long as they liked?
overindulgent	2	95	Would you try to provide limitless treats for your family?
over-tolerant	1	38	Would you allow someone to get away with not repaying you a loan?
over-tolerant	2	51	Would you be inclined to keep on clearing up the rest of the family's mess?
<b>COMPLIANT/ RESISTANT</b>			
submissive	1	44	Would you take some unfair criticism, assuming the person must be right?
submissive	2	82	Would you go along with your companion's decision on where to go for the holiday?
placating	2	80	Might you say sorry when the bully barges past?

**Subsidiary Modes**

<b>CRITICISING</b>			
punitive	2	93	Would you be inclined to go without your treat because you felt you hadn't done well enough?
<b>ACCOUNTING</b>			
alert	1	57	Would you detect that the wind had changed direction?
<b>IMMATURE</b>			
inconsiderate	2	77	Would you continue to talk to the cashier even though the queue is getting longer and longer?

**Modes NEGATIVELY correlated**

<b>STRUCTURING</b>			
firm	2	65	Would you refuse to let the children have the forbidden biscuits, although they keep whining for them?

**THEME**

**"Doormat", - (Rescuer/Victim classic)**

**Description**

This is a boundary-less weak-willed and soft-hearted pattern – well meaning but lacking a sense of what people actually need or what might be good for them, self-blaming and yet intrusive and inconsiderate, playing doormat and slave to others.

**Appendix A.6.**  
**Factor Analysis Form A Component A9**

**Main Modes Represented**

<b>NURTURING</b>		
cherishing	1	69 Would you remember friends' birthdays and anniversaries with a card or celebration?
cherishing	2	104 Would you warm the beds ready for visitors arriving late on a cold night?
protective	2	59 Would you have your medicine cupboard fitted with child-proof locks?
<b>COOPERATIVE</b>		
assertive	2	101 Would you take steps to find out why you were not appointed for the job?
friendly	1	23 Would you usually greet others warmly?

**Subsidiary Modes**

<b>CRITICISING</b>		
bossy	1	5 Would you insist on how the room is to be arranged?
<b>ACCOUNTING</b>		
aware	1	15 Would you realise that your feet are becoming cold as the temperature drops?

**Modes NEGATIVELY correlated**

<b>IMMATURE</b>		
unorganised	2	107 Might you organise an outing without confirming the necessary transport?
selfish	2	79 Might you keep goodies hidden till other people have gone?

**THEME**

**"Warmly Welcoming"**

**Description**

This is a warmly welcoming pattern – intent on enhancing the welfare of self and others with regards to safety, comfort and feelings, tuning in to others' needs and standing up for self and own ideas as well.

**Appendix A.6.**  
**Factor Analysis Form A Component A10**

**Main Modes Represented**

<b>MARSH/ MALLOWING</b>			
overprotective	1	46	Would you refuse to let the children enter the swimming gala, in case they drown?
overprotective	2	61	Would you put your children to bed if they had a bout of sneezing, to be on the safe side?
<b>ACCOUNTING</b>			
evaluative	1	39	Would you make notes about the houses for sale and compare them to help you choose?
evaluative	2	42	Would you gather as many facts as possible before deciding which car to buy?

**Subsidiary Modes**

<b>CRITICISING</b>			
blaming	1	24	Would you protest that you could not finish the job because of lack of support from others?
<b>IMMATURE</b>			
inconsiderate	2	77	Would you continue to talk to the cashier even though the queue is getting longer and longer?

**Modes NEGATIVELY correlated**

<b>ACCOUNTING</b>			
rational	2	66	Would you seek an explanation to make sense of the conflicting messages?
<b>COOPERATIVE</b>			
considerate	1	22	Would you switch off the TV when the visitors arrive?

**THEME**

**"Interferer",- (Fuss-pot)**

**Description**

This is an irrational, unreasonable and fussy pattern, lacking warmth and understanding – taking unnecessary precautions which don't benefit the recipients whose actual needs get disregarded and who may get blamed for what the person fails to do.



**Appendix A.6.**  
**Factor Analysis Form B Component B1**

**Main Modes Represented**

<b>CRITICISING</b>			
<b>punitive</b>	1	9	Might you send the children to bed supperless if they'd been naughty, to teach them a lesson?
<b>punitive</b>	2	93	Would you think it a good idea to deny all the children playtime when some of them misbehave?
<b>dominating</b>	1	2	Would you tend to keep steering the conversation onto your preferred topics?
<b>bossy</b>	2	102	Would you be tempted to keep telling the expert removers what to do next to load the furniture?
<b>judgmental</b>	1	18	Would you call an adult person silly to be afraid of lighting the matches?
<b>blaming</b>	1	24	Would you maintain that you wouldn't have broken the cup if someone else hadn't left it in a silly place?
<b>blaming</b>	2	63	Would you be likely to insist that the mess you're in is someone else's fault?
<b>IMMATURE</b>			
<b>inconsiderate</b>	1	53	Might you leave your car blocking someone else in ?
<b>inconsiderate</b>	2	77	Might you stand up while watching the show, blocking the view for those behind?
<b>infantile</b>	1	1	Might you have a temper tantrum if you were frustrated beyond endurance?
<b>infantile</b>	2	91	Would you be inclined to sulk when you don't get your choice of TV programme?
<b>egocentric</b>	1	41	Although it's your friend who's ill, might you spend the time talking about your own ailments?
<b>egocentric</b>	2	99	Would you be inclined to see things only from your own viewpoint?
<b>selfish</b>	1	10	Would you find it hard to make the effort to take your sick friend to hospital, even though you are free?

**Subsidiary Modes**

<b>MARSH/ MALLOWING</b>			
<b>inconsistent</b>	2	70	Would you occasionally insist on the safety rules, but otherwise let them do as they please?
<b>COMPLIANT/ RESISTANT</b>			
<b>defiant</b>	2	33	During the drought, despite the hosepipe ban, would you still water the garden?
<b>inhibited</b>	2	27	Might you sit through the meeting without contributing, even though invited to do so?
<b>ACCOUNTING</b>			
<b>rational</b>	1	26	Would you work out a system to maximise your chance to win?

**Continued on next page.**

Appendix A.6.

Modes NEGATIVELY correlated

Component B1 continued

<b>MARSH/ MALLOWING</b>			
<b>overindulgent</b>	1	95	Would you buy you child whatever he/she asks for?
<b>NURTURING</b>			
<b>cherishing</b>	2	104	Would you buy the book for your friend, remembering how much this friend wanted a copy?
<b>understanding</b>	2	88	Would you appreciate other people's differing views on the matter?
<b>encouraging</b>	1	87	Would you show appreciation of the beginner's achievements, however small?
<b>ACCOUNTING</b>			
<b>alert</b>	1	32	Would you spot a safe gap in the traffic, so you could cross the road?
<b>rational</b>	2	66	Would you check out the facts about the rumour before taking any action?
<b>aware</b>	1	15	Would you realise that some of the people present seem unhappy with the proposed arrangement?
<b>COOPERATIVE</b>			
<b>considerate</b>	2	74	Would you let the hurried person in the supermarket queue behing you go first with their single item?

**Appendix A.6.**  
**Factor Analysis Form B Component B2**

**Main Modes Represented**

<b>NURTURING</b>			
<b>cherishing</b>	1	69	Would you provide a deliciously tempting lunch for your child who is poorly?
<b>cherishing</b>	2	104	Would you buy the book for your friend, remembering how much this friend wanted a copy?
<b>understanding</b>	1	25	Would you let the children have their tea on their own so they could giggle and chat freely?
<b>understanding</b>	2	88	Would you appreciate other people's differing views on the matter?
<b>encouraging</b>	1	87	Would you show appreciation of the beginner's achievements, however small?
<b>encouraging</b>	2	94	Would you turn up to watch an event in order to support friends taking part?
<b>empathic</b>	1	54	Would you sense that letting the child bring their pet on the visit would help prevent homesickness?
<b>empathic</b>	2	64	Would you tune in to how your nervous companions were feeling on the scary walk?
<b>SPONTANEOUS</b>			
<b>expressive</b>	1	20	Would you scream with fright on a ghost train?
<b>expressive</b>	2	105	At a time for celebration would you dance for joy?
<b>zestful</b>	1	17	When people are flagging, would you create a zoom of energy to liven them up?
<b>zestful</b>	2	28	Might you sing with delight at the start of a new day?
<b>creative</b>	1	4	Would you make a range of attractive presents out of oddments of materials?
<b>creative</b>	2	19	Would you gather the leaves and flowers you were given into a beautiful arrangement?

**Subsidiary Modes**

<b>STRUCTURING</b>			
<b>firm</b>	2	65	Would you insist that the promise to the children is kept?
<b>inspiring</b>	1	8	Would you convince people they can do really well and succeed?
<b>authoritative</b>	2	75	Would you tell the youngsters to stop chasing about at the roadside 'cos it's dangerous?
<b>MARSH/ MALLOWING</b>			
<b>inconsistent</b>	2	70	Might you occasionally insist on the safety rules but otherwise let them do as they please?
<b>IMMATURE</b>			
<b>infantile</b>	1	1	Would you have a temper tantrum if frustrated beyond endurance?

**Modes NEGATIVELY correlated**

<b>CRITICISING</b>			
<b>fault-finding</b>	2		Would you be inclined to point out the mistakes in the piece of work?

<b>THEME</b> <b>"Warm Lively Friend"</b>
<b>Description</b> This is a lively, sympathetic pattern – very positive towards others, energetic and enabling, gregarious and involved, providing boundaries and encouragement to do well and express feelings.

**Appendix A.6.**  
**Factor Analysis Form B Component B3**

**Main Modes Represented**

<b>ACCOUNTING</b>			
<b>grounded</b>	<b>1</b>	<b>55</b>	Would you keep your wits about you at a time of conflict?
<b>grounded</b>	<b>2</b>	<b>67</b>	Would you keep calm and in touch with reality even though you found the film terrifying?
<b>precise</b>	<b>1</b>	<b>89</b>	Would you ensure the measurements for the wallpaper are accurate?
<b>precise</b>	<b>2</b>	<b>96</b>	Would you check the accuracy of the scales before weighing out the ingredients?
<b>alert</b>	<b>2</b>	<b>57</b>	Would you pay full attention while the rules are explained?
<b>COOPERATIVE</b>			
<b>confident</b>	<b>1</b>	<b>12</b>	Would you have a go at things, believing that you'll soon learn how to do them?
<b>confident</b>	<b>2</b>	<b>31</b>	Would you feel OK about taking on the increased challenges of a new job?
<b>adaptable</b>	<b>2</b>	<b>60</b>	When the rain starts, would you set up to eat the picnic under cover instead?
<b>friendly</b>	<b>1</b>	<b>23</b>	Would you open the door with a smile?

**Subsidiary Modes**

<b>STRUCTURING</b>			
<b>firm</b>	<b>1</b>	<b>48</b>	Would you make sure the contract is clear and carried through?
<b>consistent</b>	<b>2</b>	<b>68</b>	Having agreed a set of rules would you then apply them?
<b>NURTURING</b>			
<b>understanding</b>	<b>2</b>	<b>88</b>	Would you appreciate others' differing views on the subject?
<b>protective</b>	<b>2</b>	<b>59</b>	Would you take the children to the safe road crossing place?
<b>SPONTANEOUS</b>			
<b>ingenious</b>	<b>1</b>	<b>76</b>	Would you devise a way to make it possible to move the heavy load?
<b>IMMATURE</b>			
<b>reckless</b>	<b>1</b>	<b>40</b>	Would you go out in the car in bad weather conditions even though police warnings have been given?

**Modes NEGATIVELY correlated**

<b>SPONTANEOUS</b>			
<b>expressive</b>	<b>1</b>	<b>20</b>	Would you scream with fright on a ghost train?
<b>IMMATURE</b>			
<b>infantile</b>	<b>2</b>	<b>91</b>	Would you be inclined to sulk when you don't get your choice of TV programme?

**Appendix A.6.**  
**Factor Analysis Form B Component B4**

**Main Modes Represented**

<b>CRITICISING</b>			
<b>fault-finding</b>	1	21	Would you comment on the little smears left on the washed up dishes?
<b>fault-finding</b>	2	78	Would you be inclined to point out the mistakes in the piece of work?
<b>blaming</b>	1	24	Would you maintain that you wouldn't have broken the cup if someone else hadn't left it in a silly place?
<b>blaming</b>	2	63	Would you insist that the mess you're in is someone else's fault?
<b>judgmental</b>	2	100	Would you define an inadequate report as "no good"?
<b>dominating</b>	2	86	Would you insist on having to approve initiatives made by other people?
<b>MARSH/ MALLOWING</b>			
<b>smothering</b>	1	43	Would you insist on doing your grown-up children's washing when they come home for the weekend?
<b>smothering</b>	2	90	Would you assume you'll do your partner's Xmas shopping as well as your own?
<b>over-protection</b>	1	46	Would you insist on walking your 12 year-old to school each day?
<b>over-tolerant</b>	2	51	Would you keep up your smiling acceptance even though your guests are disturbing the neighbours?
<b>over-indulgence</b>	2		Would you buy your child whatever he/she asked for?

**Subsidiary Modes**

<b>NURTURING</b>			
<b>protective</b>	1	30	Would you make sure your partner wasn't disturbed while revising for next day's exam?
<b>ACCOUNTING</b>			
<b>evaluative</b>	1	39	Would you compare the results with those of previous years in order to come to a conclusion?
<b>IMMATURE</b>			
<b>selfish</b>	2	79	Would you be reluctant to share your brand-new felt-tip pens with anyone?

**Modes NEGATIVELY correlated**

**NONE**

**Appendix A.6.**  
**Factor Analysis Form B Component B5**

**Main Modes Represented**

<b>CRITICISING</b>			
<b>dominating</b>	1	2	Would you tend to keep steering the conversation onto your preferred topic?
<b>judgmental</b>	1	18	Would you call an adult person silly to be afraid of lighting the matches?
<b>blaming</b>	2	63	Would you be inclined to insist that the mess you're in is someone else's fault?
<b>bossy</b>	1	5	Would you take it on yourself to issue instructions in a group of which you are just an ordinary member?
<b>SPONTANEOUS</b>			
<b>zestful</b>	1	17	When people are flagging, would you create a zoom of energy to liven them up?
<b>imaginative</b>	2	72	If you didn't know the facts, would you be good at inventing a story to explain the situation?
<b>ingenious</b>	2	103	Would you invent a way to switch off the light without getting out of bed?
<b>COMPLIANT/ RESISTANT</b>			
<b>defiant</b>	2	85	Would you refuse to do the washing up when it's your turn on the rota?
<b>rebellious</b>	1	11	Would you plan how to avoid going to the required meeting?
<b>anxious</b>	2	108	Although they say you look good in your party clothes, would you still tend to worry about whether you're wearing the right things?

**Subsidiary Modes**

<b>STRUCTURING</b>			
<b>authoritative</b>	1	36	Would you take on the role of starter for the races?
<b>ACCOUNTING</b>			
<b>rational</b>	1	26	Would you work out a system to maximise your chance to win?

**Modes NEGATIVELY correlated**

**NONE**

**Appendix A.6.**  
**Factor Analysis Form B Component B6**

**Main Modes Represented**

<b>ACCOUNTING</b>			
aware	1	15	Would you realise that some of the people present seem unhappy with the proposed arrangement?
evaluative	1	39	Would you compare the results with those of previous years in order to come to a conclusion?
evaluative	2	42	Would you consider in what way the outcomes of the project match up with the original goals?
<b>SPONTANEOUS</b>			
creative	1	4	Would you make a range of attractive presents out of oddments of materials?
curious	1	14	Would you be keen to find out lots more about a situation that intrigued you?
curious	2	52	Would you be fascinated to experience the ways of life in different parts of the world?
imaginative	1	3	Hearing an interesting sound, would you conjure up lots of ideas for what it might be?

**Subsidiary Modes**

<b>MARSH/ MALLOWING</b>			
over-indulgent	1	37	Would you intend to excuse bad behaviour because the youngster had a difficult home life?
<b>STRUCTURING</b>			
helpful	1	34	Would you hold the boat steady so the children can climb out by themselves?
<b>NURTURING</b>			
understanding	1	25	Would you let the children have their tea on their own so they can chat and giggle together freely?
<b>COOPERATIVE</b>			
adaptable	1	35	Would you match your walking pace to that of your companion?
<b>COMPLIANT/ RESISTANT</b>			
submissive	2	82	Might you agree to work late, unpaid, for a bullying boss?

**Modes NEGATIVELY correlated**

<b>COOPERATIVE</b>			
sociable	2	50	Would you get together with other people as a way to have a good time?
<b>COMPLIANT/ RESISTANT</b>			
anxious	1	71	Would you keep consulting the vet about your pet's loss of appetite, despite having been told all is well?

**Appendix A.6.  
Factor Analysis Form B Component B7**

**Main Modes Represented**

<b>MARSH/ MALLOWING</b>			
<b>smothering</b>	1	43	Would you insist on doing your grown up children's washing when they come for the weekend?
<b>smothering</b>	2	90	Would you assume you'll do your partner's Xmas shopping as well as your own?
<b>over-tolerant</b>	1	38	Would you give in to your partner's tantrum for the sake of peace?
<b>self-denying</b>	1	58	Would you make sure everyone else has a good helping by not having any yourself?
<b>self-denying</b>	2	92	would you find it hard to believe that your point of view matters even when you're in charge?
<b>COMPLIANT/ RESISTANT</b>			
<b>inhibited</b>	1	6	Although you can't see the board well enough, would you be reluctant to ask for help?
<b>inhibited</b>	2	27	Would you sit through the meeting without contributing although you are invited to do so?
<b>submissive</b>	1	44	Would you be reluctant to challenge authority?
<b>placating</b>	2	80	To avoid the other person getting angry, would you agree to change the plans?

**Subsidiary Modes**

NONE

**Modes NEGATIVELY correlated**

<b>CRITICISING</b>			
<b>bossy</b>	1	5	Would you take it on yourself to issue instructions in a group of which you are just an ordinary member?
<b>STRUCTURING</b>			
<b>consistent</b>	1	47	Having decided not to buy certain goods on principle, would you then make sure to avoid buying them?
<b>COOPERATIVE</b>			
<b>assertive</b>	1	7	Would you put your point of view across clearly in an argument?



**Appendix A.6.**  
**Factor Analysis Form B Component B8**

**Main Modes Represented**

<b>MARSH/ MALLOWING</b>			
<b>self-denying</b>	1	58	Would you make sure everyone else has a good helping by not having any yourself?
<b>NURTURING</b>			
<b>protective</b>	1	30	Would you make sure your partner wasn't disturbed while revising for the next day's exam?
<b>ACCOUNTING</b>			
<b>precise</b>	1	89	Would you ensure the measurements for the wallpaper are accurate?
<b>alert</b>	2	57	Would you pay full attention while the rules are explained?
<b>COOPERATIVE</b>			
<b>friendly</b>	2	98	Would you welcome the new neighbours with a card or a visit?
<b>assertive</b>	2	101	Would you show the manager what's wrong with the faulty goods and ask for your money back?
<b>SPONTANEOUS</b>			
<b>creative</b>	2	19	Would you gather the flowers and leaves you were given into a beautiful arrangement?

**Subsidiary Modes**

SEE ABOVE

**Modes NEGATIVELY correlated**

<b>MARSH/ MALLOWING</b>			
<b>over-indulgent</b>	1	37	Would you tend to excuse the bad behaviour because the youngster had a difficult home life?
<b>over-indulgent</b>	2	95	Would you buy your child whatever he/she asked for?
<b>IMMATURE</b>			
<b>inconsiderate</b>	1	53	Might you leave your car parked blocking someone in?
<b>unorganised</b>	1	106	Would you find it difficult to keep a handy pen by the phone?
<b>unorganised</b>	2	107	Might you keep all sorts of important documents in an unmarked old envelope?
<b>reckless</b>	1	40	Would you go out in the car in bad weather conditions, even though police warnings have been given?

**Appendix A.6.**  
**Factor Analysis Form B Component B9**

**Main Modes Represented**

<b>STRUCTURING</b>			
<b>firm</b>	2	65	Would you insist that the promise to the children is kept?
<b>directive</b>	2	73	Would you tell the visitors the best place to park?
<b>NURTURING</b>			
<b>protective</b>	2	59	Would you take the children to the safe road crossing place?
<b>encouraging</b>	2	94	Would you turn up to watch an event in order to support friends taking part?
<b>ACCOUNTING</b>			
<b>alert</b>	1	32	Would you spot a safe gap in the traffic, so you could cross the road?
<b>SPONTANEOUS</b>			
<b>ingenious</b>	1	76	Would you devise a way to make it possible to move a heavy load?
<b>imaginative</b>	1	3	Hearing an interesting sound, would you conjure up all sorts of interesting ideas for what it could be?
<b>COMPLIANT/ RESISTANT</b>			
<b>submissive</b>	1	44	Would you be reluctant to challenge authority?
<b>placating</b>	1	56	Would you tend to apologise before making a critical comment about something?

**Subsidiary Modes**

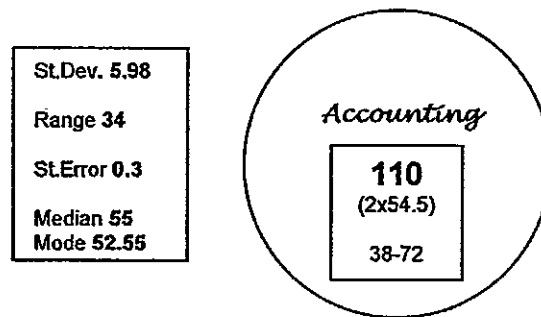
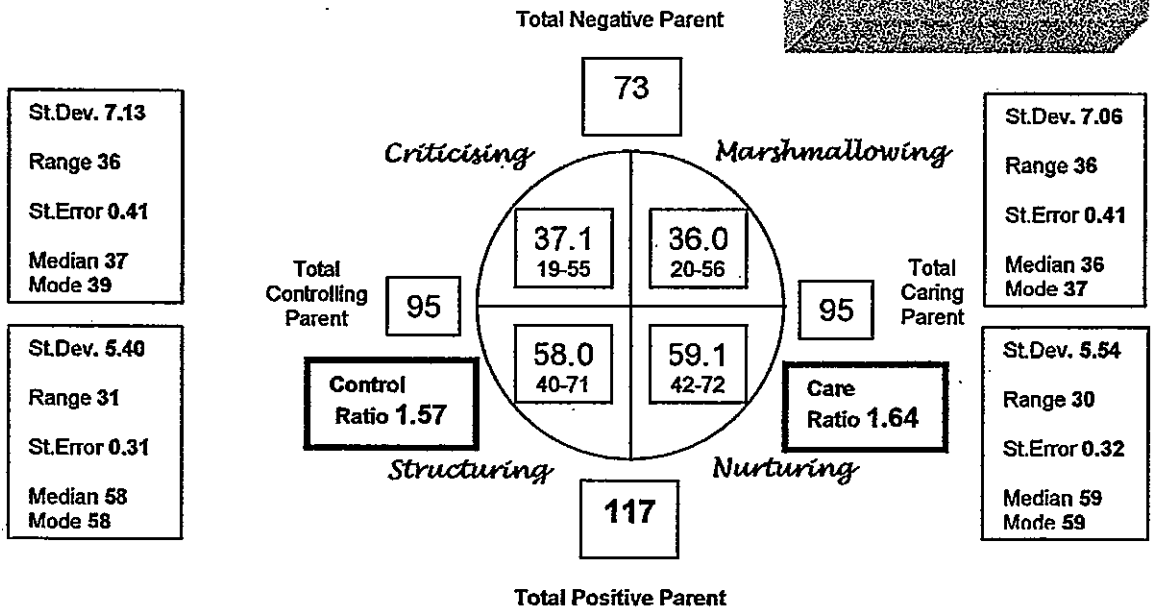
SEE ABOVE

**Modes NEGATIVELY correlated**

<b>MARSH/ MALLOWING</b>			
<b>self-denying</b>	2	92	Would you find it hard to believe that your point of view mattered, even when you're in charge?
<b>inconsistent</b>	1	70	Would you occasionally insist on the safety rules but otherwise let them do as they please?
<b>COMPLIANT/ RESISTANT</b>			
<b>rebellious</b>	1	11	Would you plan how to avoid going to the required meeting?
<b>IMMATURE</b>			
<b>reckless</b>	2	97	Would you go swimming alone in the rough sea?

# Appendix B.1. Average Total Pilot Profile

**PILOT PROFILE**  
**NORM**  
 N=302

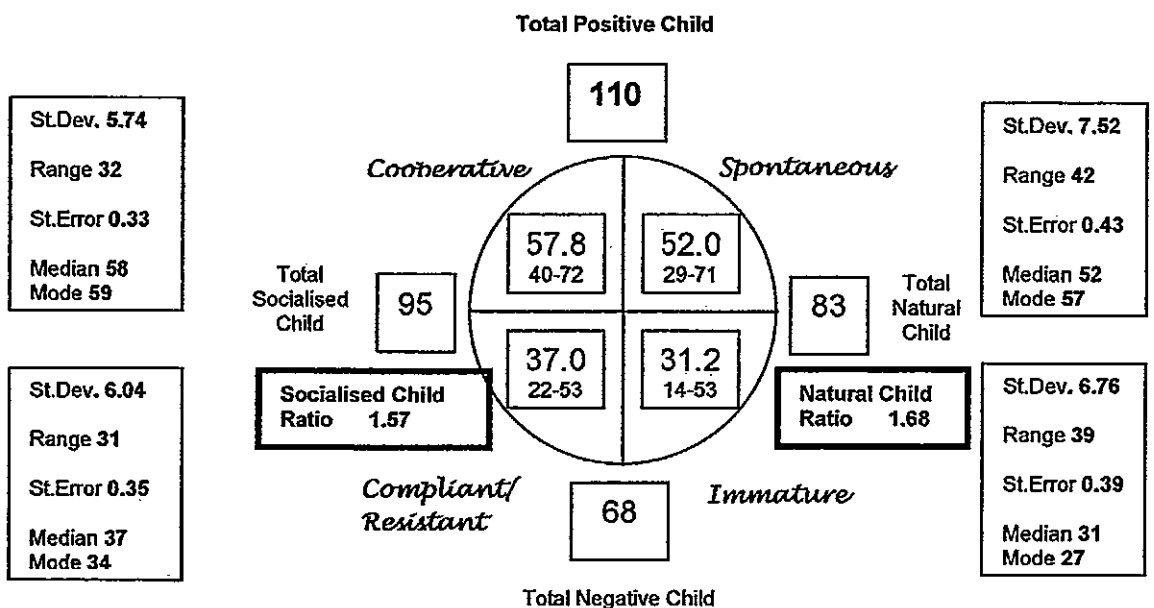


**Parent Ratio** 1.60

**FFI = 2.42**

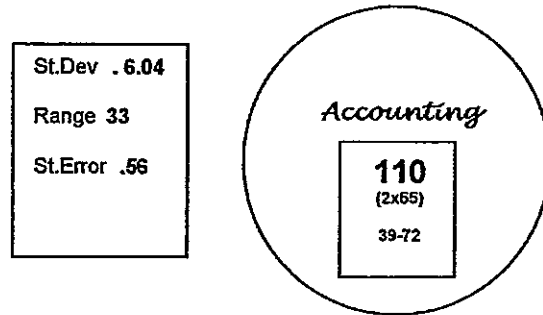
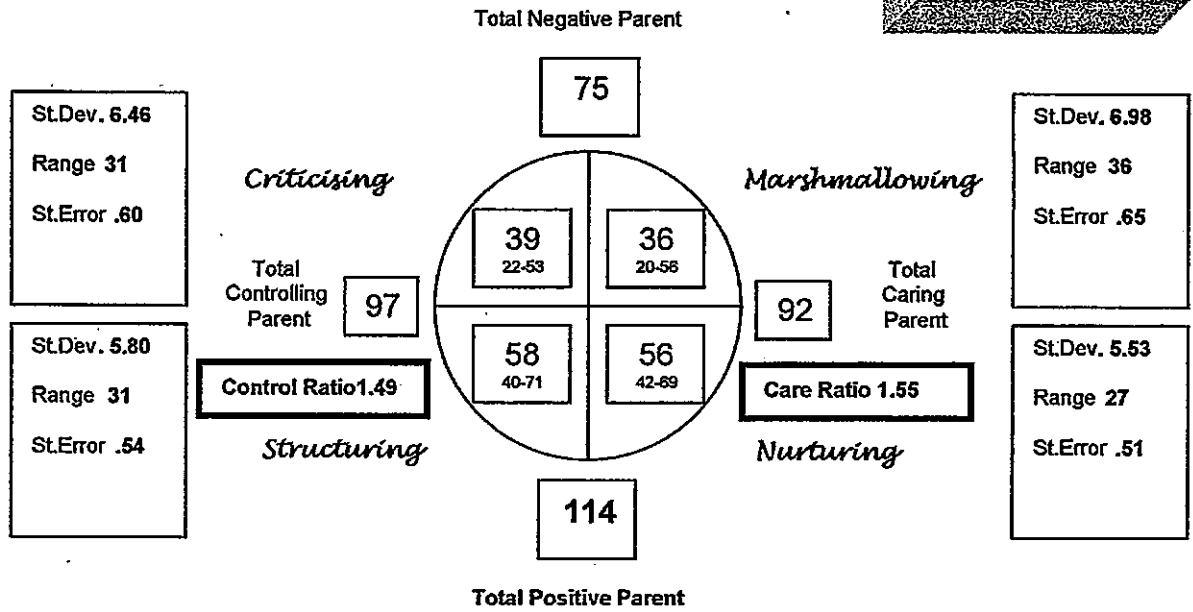
**Log\_FFI = 0.38**

**Child Ratio** 1.62

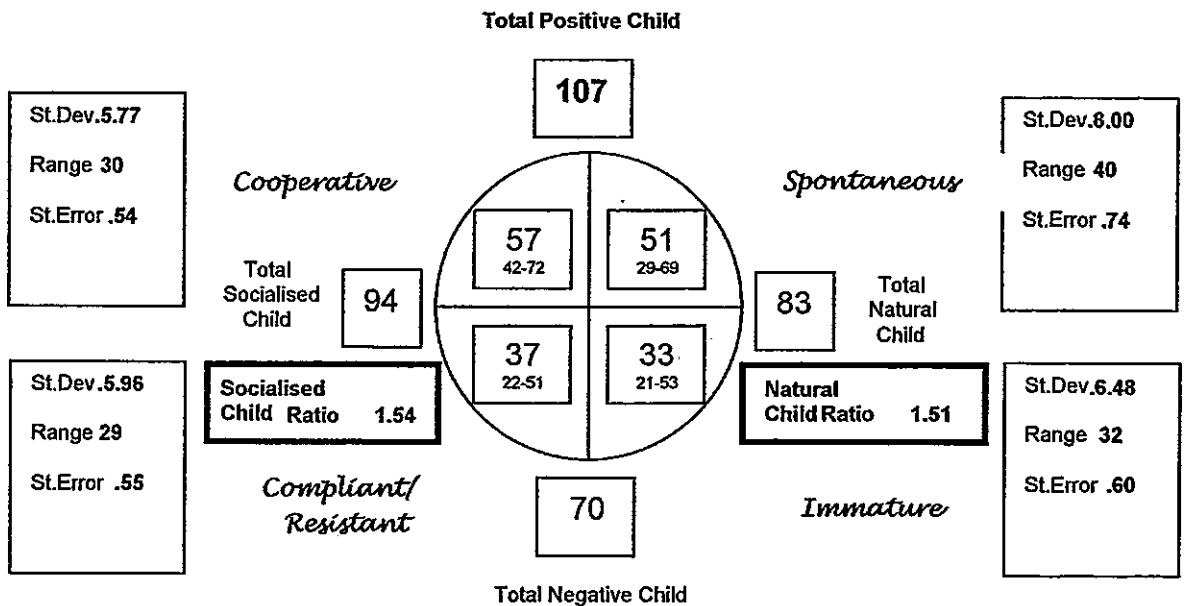


# Appendix B.2. Average Gender Profile

**MALE**  
N=116

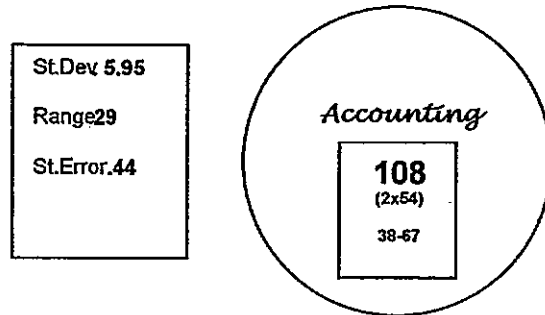
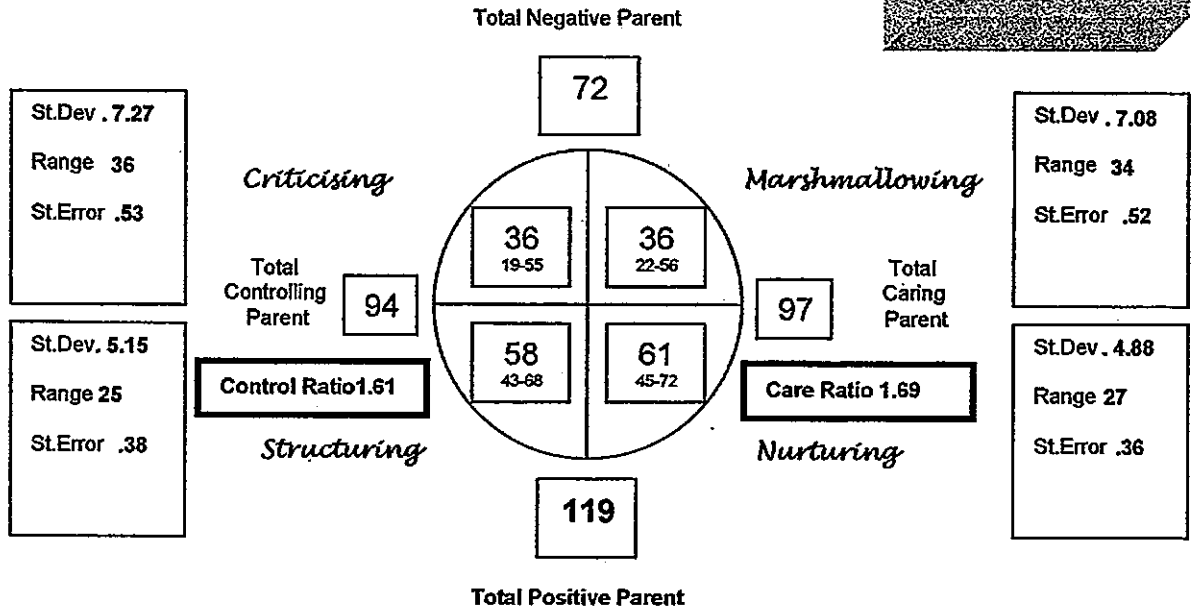


Parent Ratio 1.52  
FFI = 2.32  
Log FFI = .36  
Child Ratio 1.53



# Appendix B.3. Average Gender Profile

**FEMALE**  
N=185

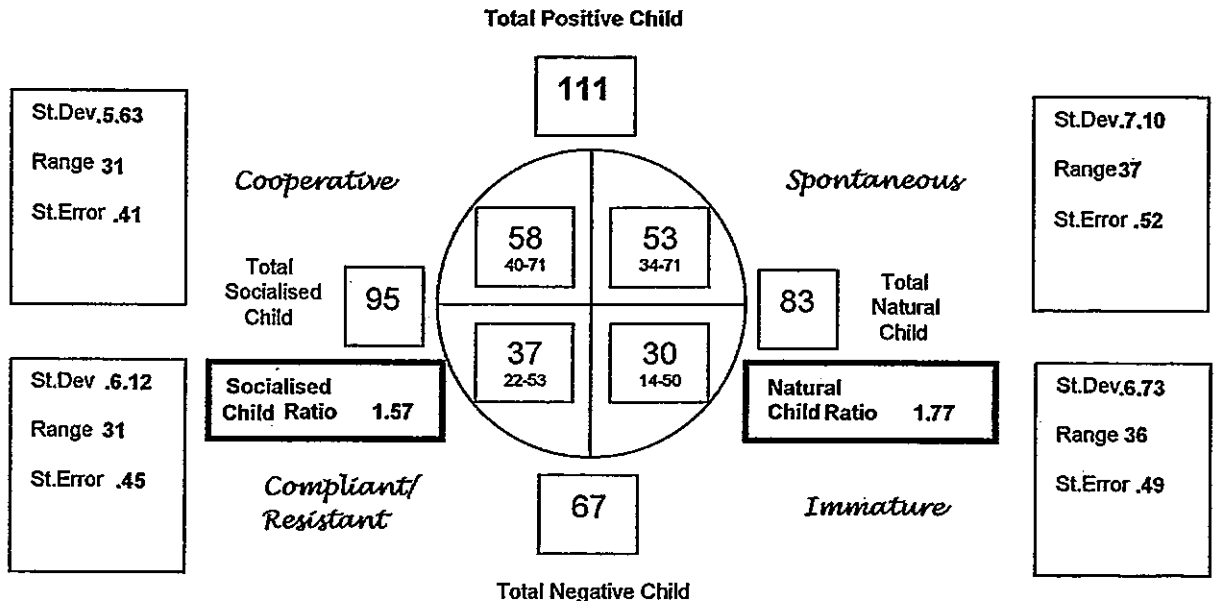


**Parent Ratio: 1.65**

**FFI = 2.49**

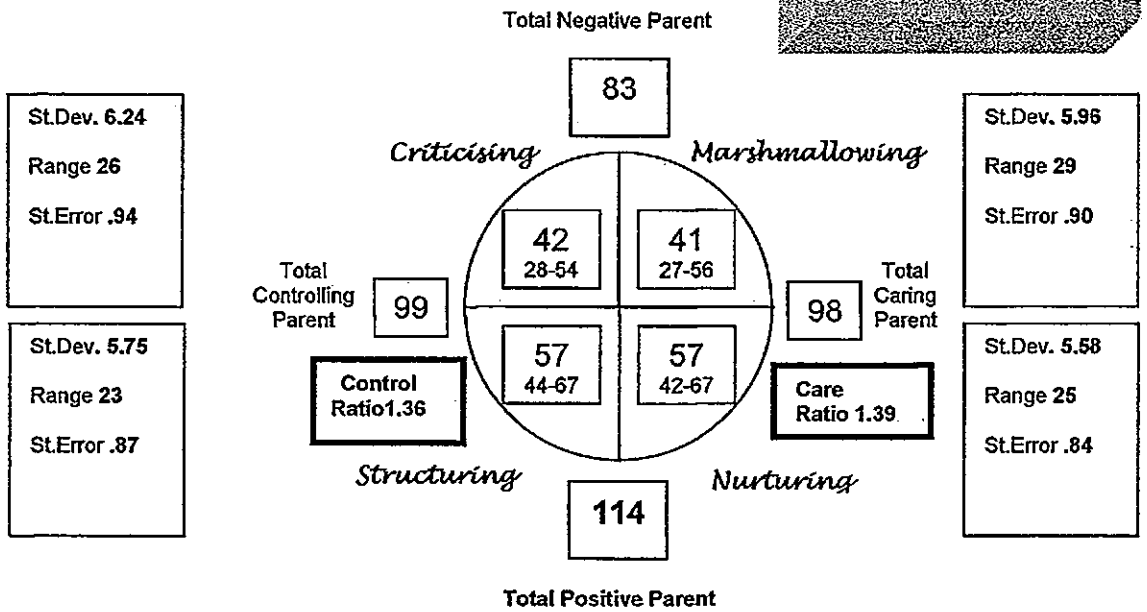
**Log\_FFI = .39**

**Child Ratio: 1.65**

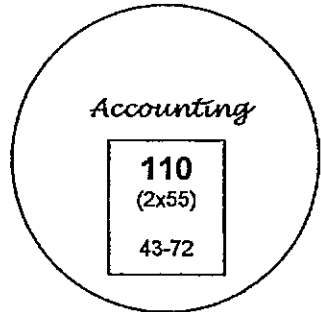


# Appendix B.4. Average Age Profile

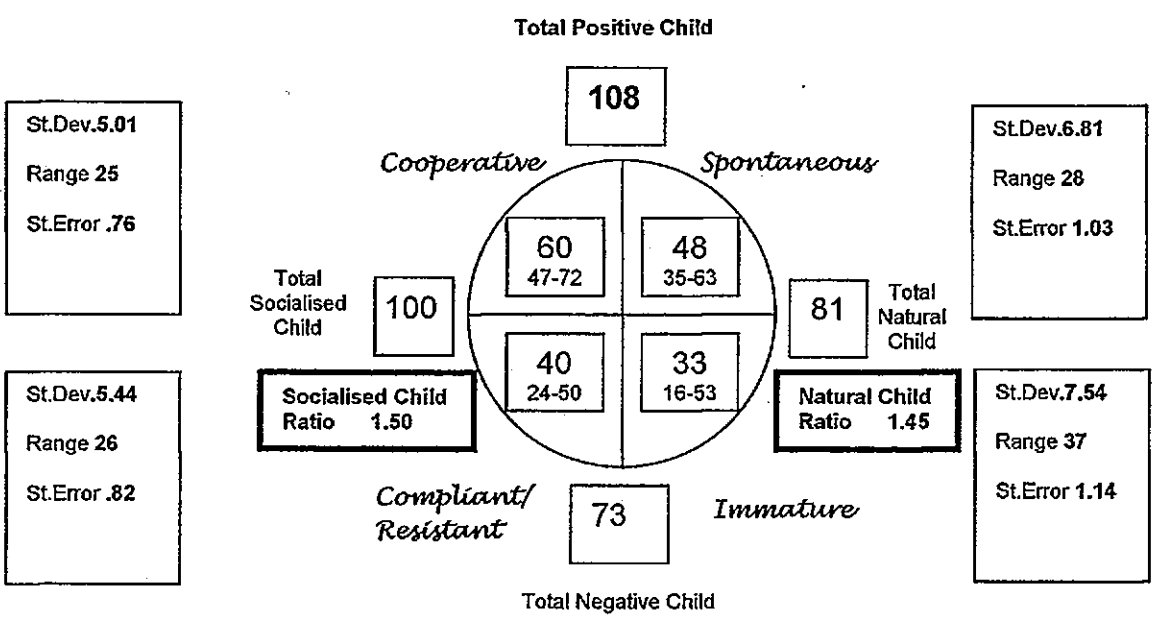
**Under 20**  
N=44



St.Dev. 5.26  
Range 29  
St.Error .79



**Parent Ratio: 1.37**  
**FFI = 2.17**  
**Log\_FFI = .33**  
**Child Ratio: 1.48**

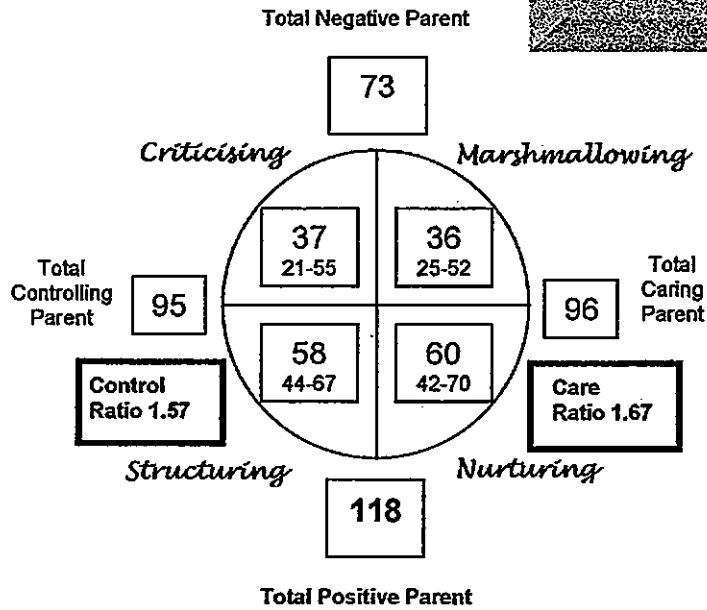


# Appendix B.5. Average Age Profile

20-29  
N=33

St.Dev. 7.13  
Range 34  
St.Error 1.24

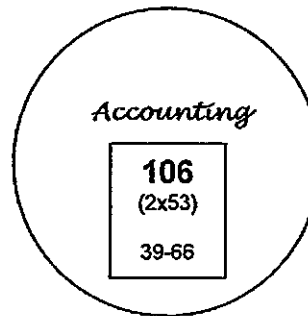
St.Dev. 5.63  
Range 23  
St.Error .98



St.Dev. 7.31  
Range 27  
St.Error 1.27

St.Dev. 6.33  
Range 28  
St.Error 1.10

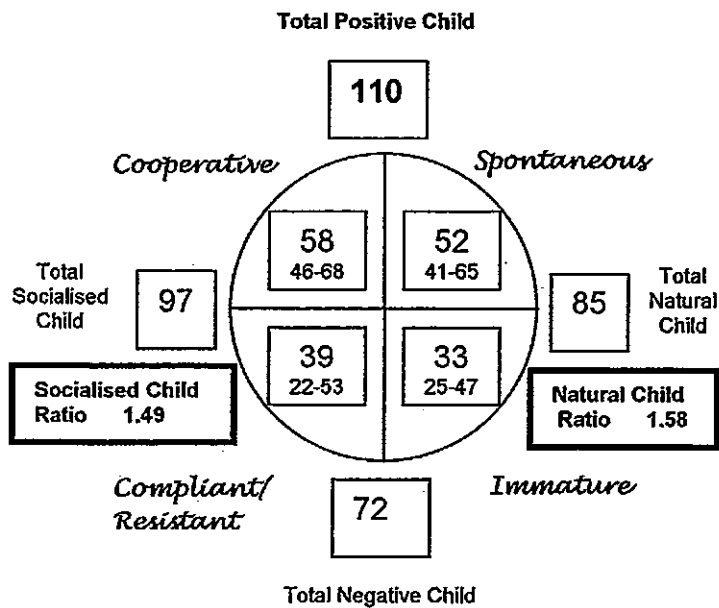
St.Dev. 6.37  
Range 27  
St.Error 1.11



Parent Ratio 1.62  
FFI = 2.37  
Log\_FFI = .37  
Child Ratio 1/53

St.Dev. 5.94  
Range 22  
St.Error 1.03

St.Dev. 6.70  
Range 31  
St.Error 1.17



St.Dev. 6.42  
Range 24  
St.Error 1.12

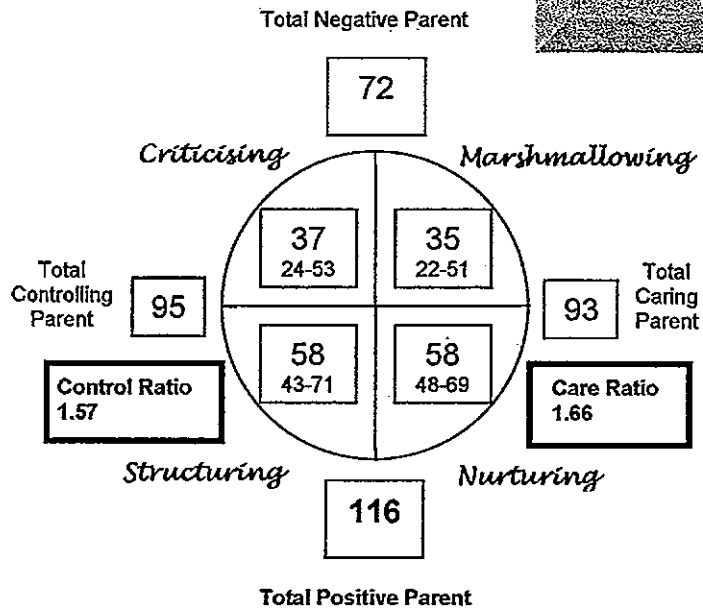
St.Dev. 5.48  
Range 22  
St.Error .95

# Appendix B.6. Average Age Profile

30-39  
N=68

St.Dev. 6.75  
Range 29  
St.Error .82

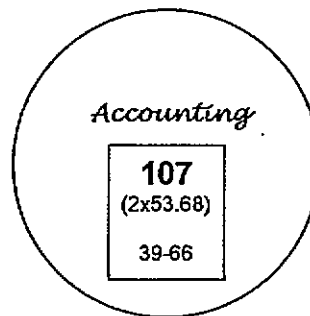
St.Dev. 5.41  
Range 28  
St.Error .66



St.Dev. 6.83  
Range 29  
St.Error .83

St.Dev. 4.89  
Range 21  
St.Error .59

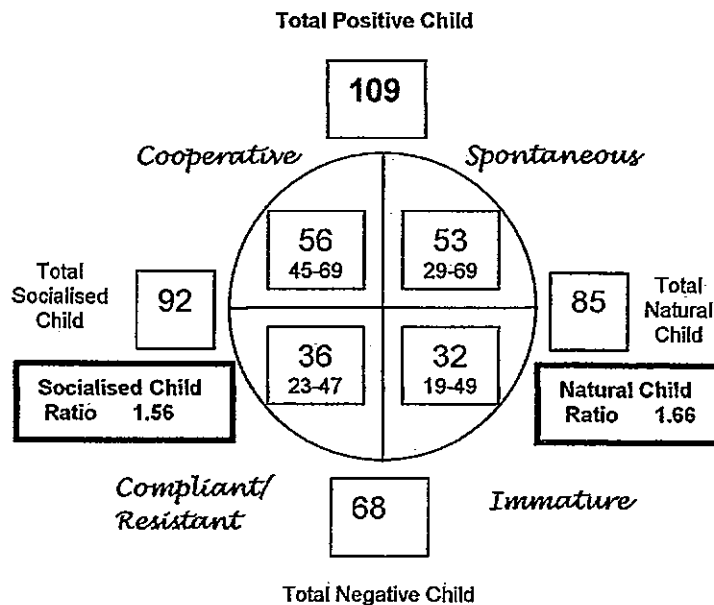
St.Dev. 6.08  
Range 27  
St.Error .74



Parent Ratio 1.61  
FFI = 2.39  
Log\_FFI = .37  
Child Ratio 1.60

St.Dev. 5.17  
Range 24  
St.Error .63

St.Dev. 5.52  
Range 24  
St.Error .67



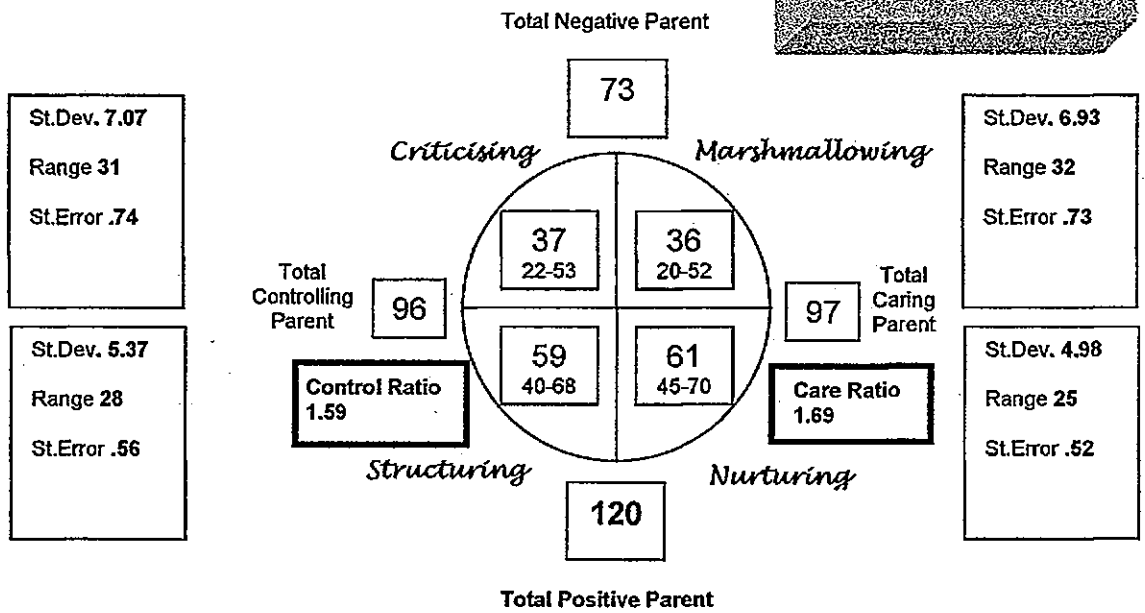
St.Dev. 8.00  
Range 40  
St.Error .97

St.Dev. 6.10  
Range 30  
St.Error .74

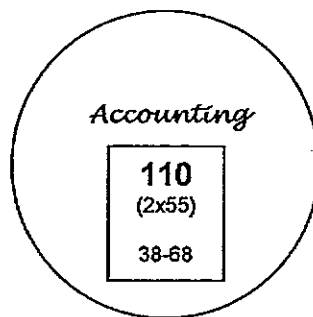


# Appendix B.7. Average Age Profile

40-49  
N=91



St.Dev. 6.05  
Range 30  
St.Error .63

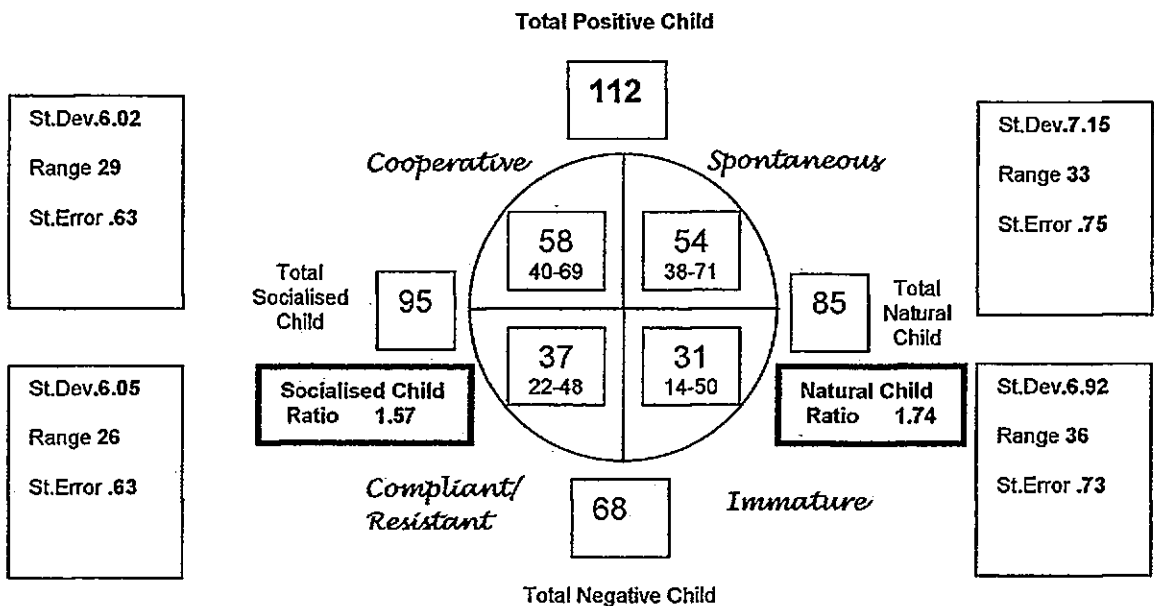


Parent Ratio 1.64

FFI = 2.46

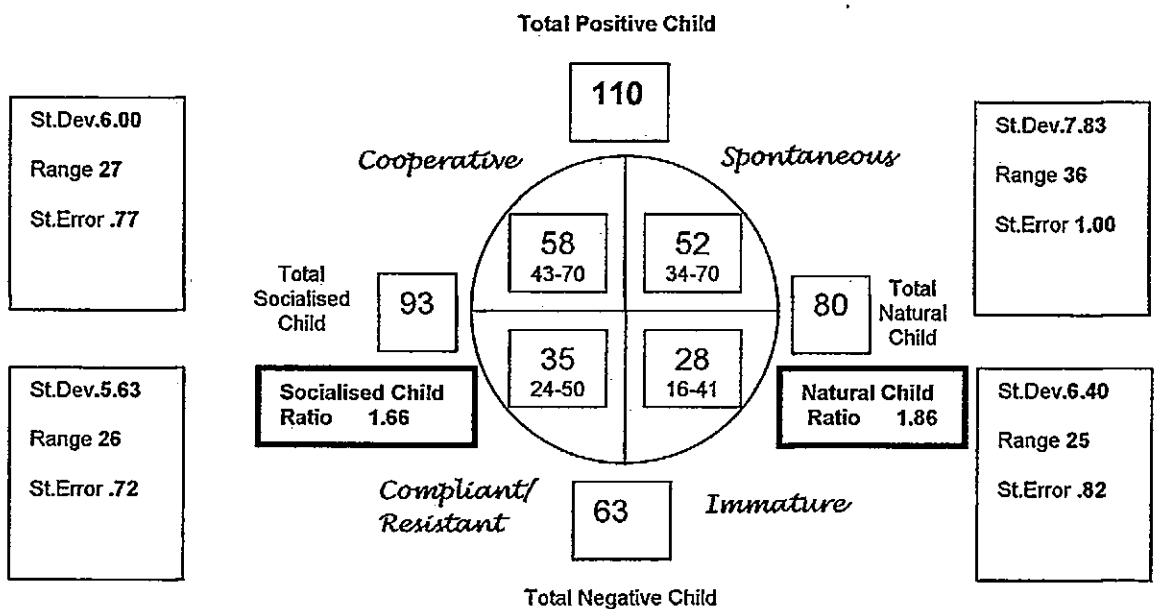
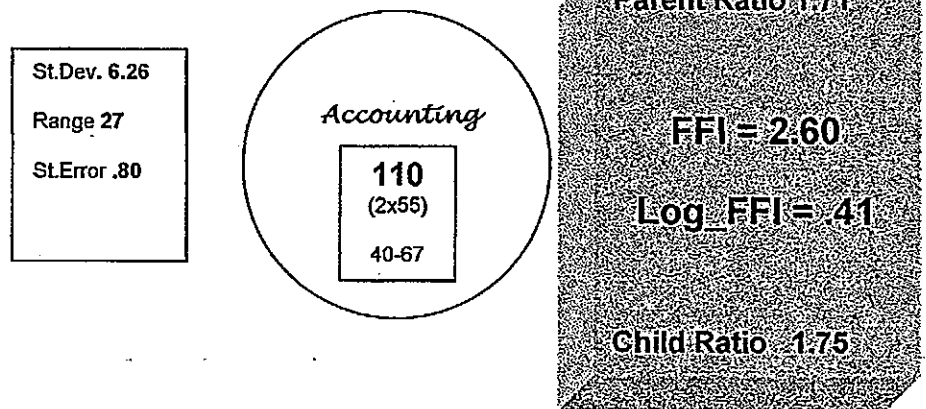
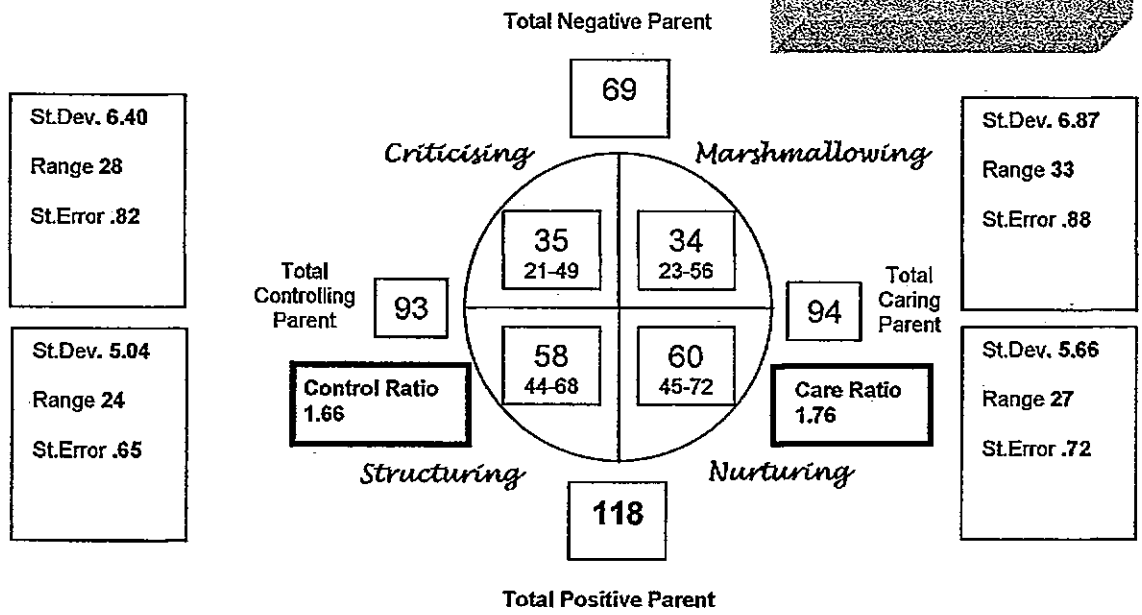
Log\_FFI = .39

Child Ratio 1.65



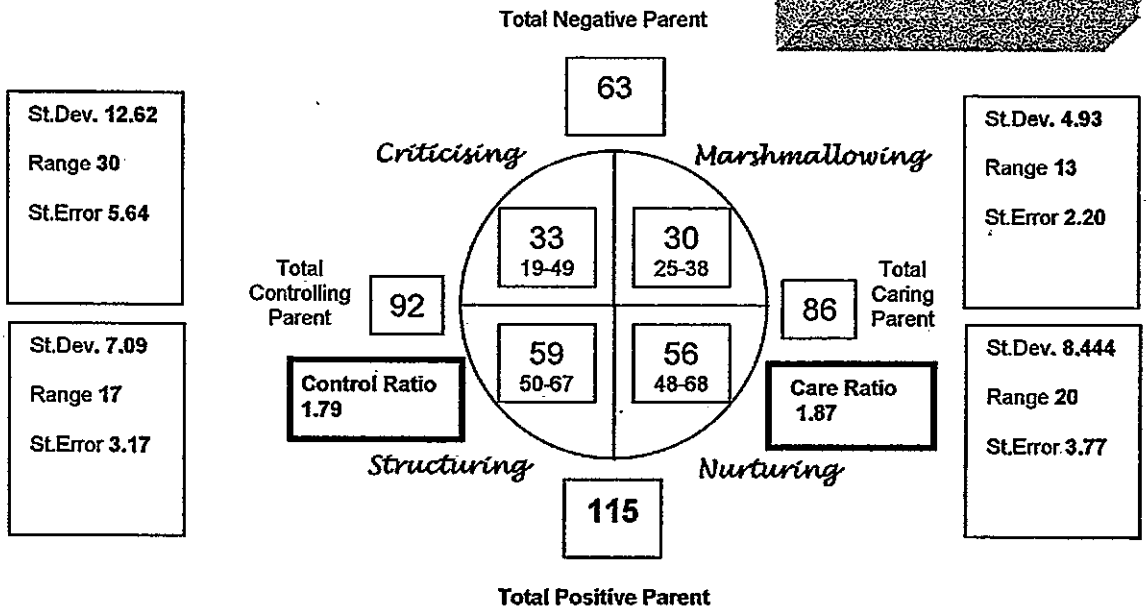
# Appendix B.8. Average Age Profile

50-59  
N=61

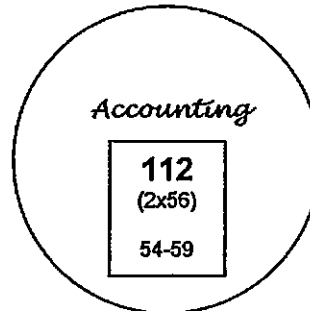


# Appendix B.9. Average Age Profile

**Over 60**  
N=5



St.Dev. 1.87  
Range 5  
St.Error .84

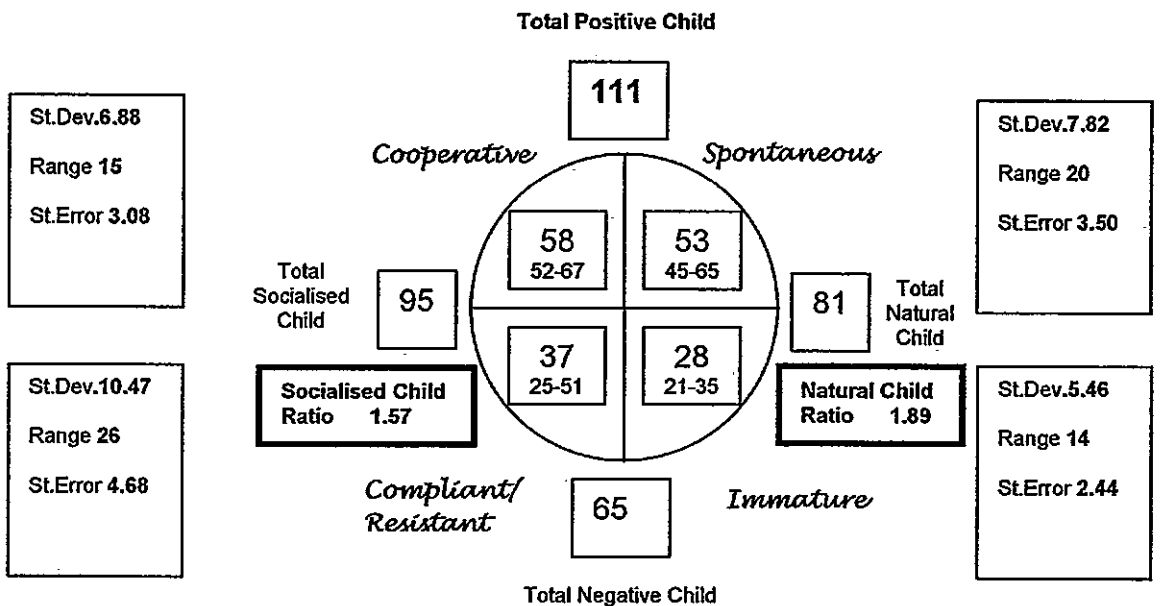


**Parent Ratio: 1.83**

**FFI = 2.74**

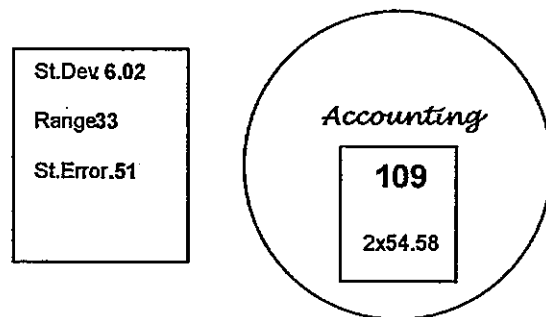
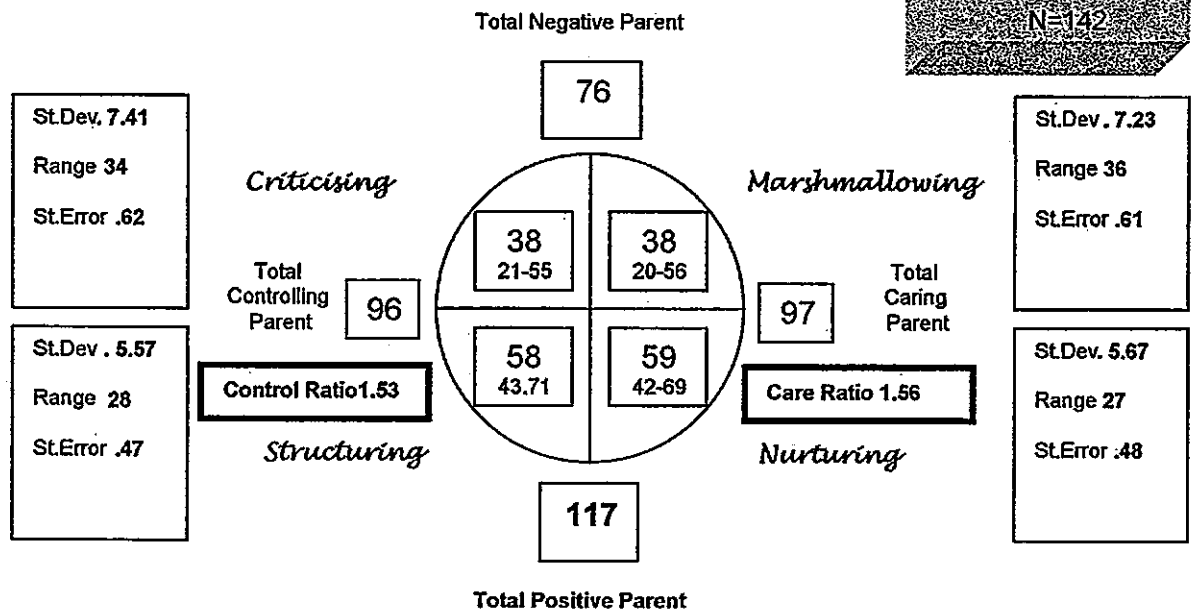
**Log\_FFI = .43**

**Child Ratio: 1.71**



# Appendix B.10 Average Professional Responsibility Level Profile

**BASIC LEVEL**  
N=142

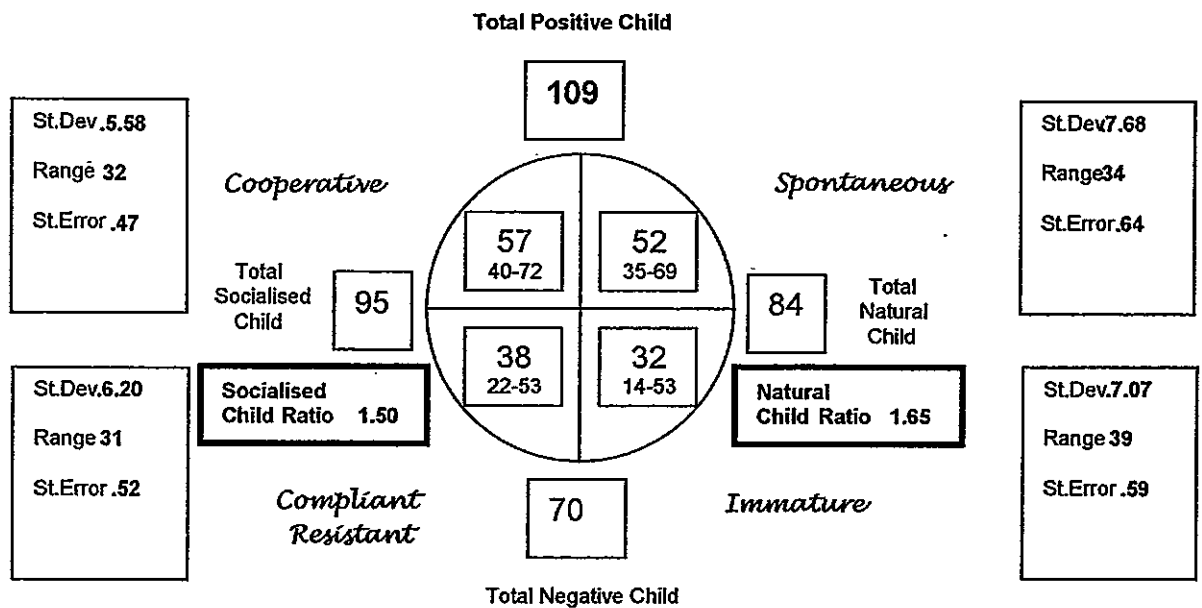


**Parent Ratio 1.54**

**FFI = 2.35**

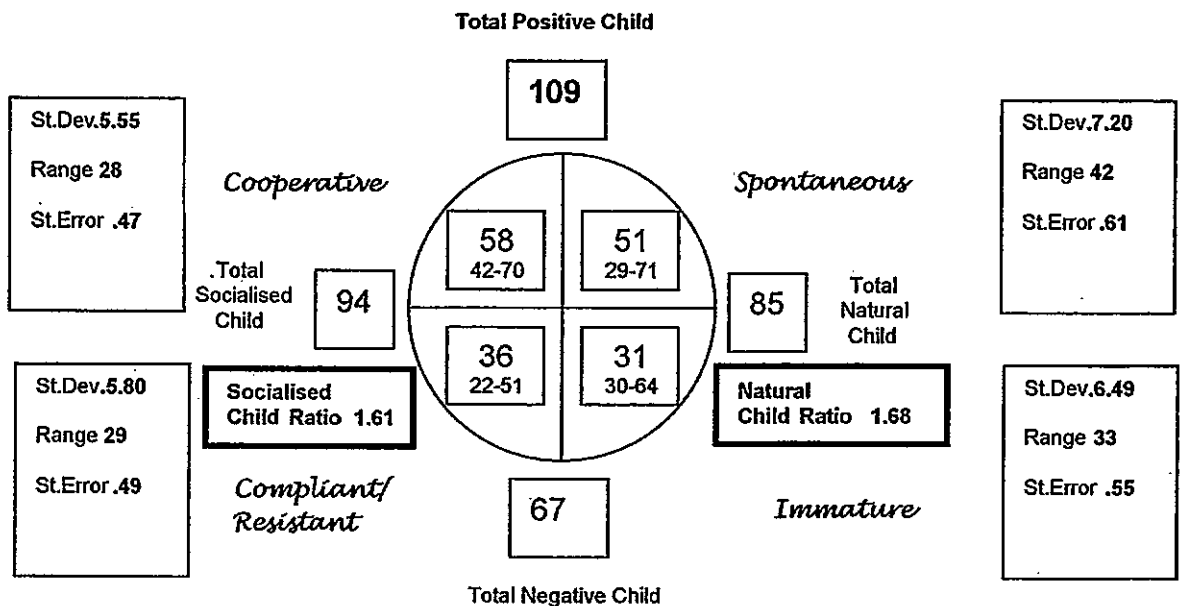
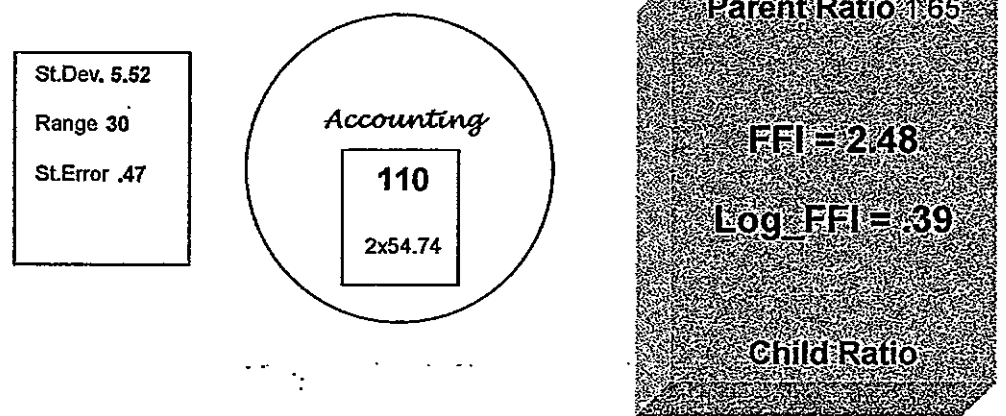
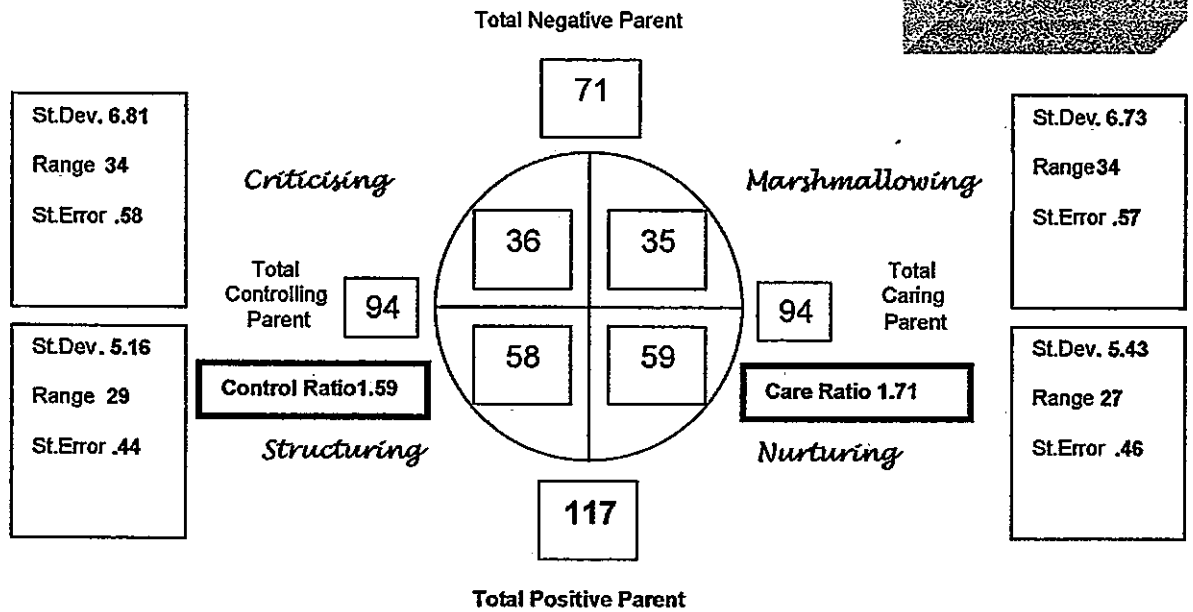
**Log\_FFI = .37**

**Child Ratio 1.56**



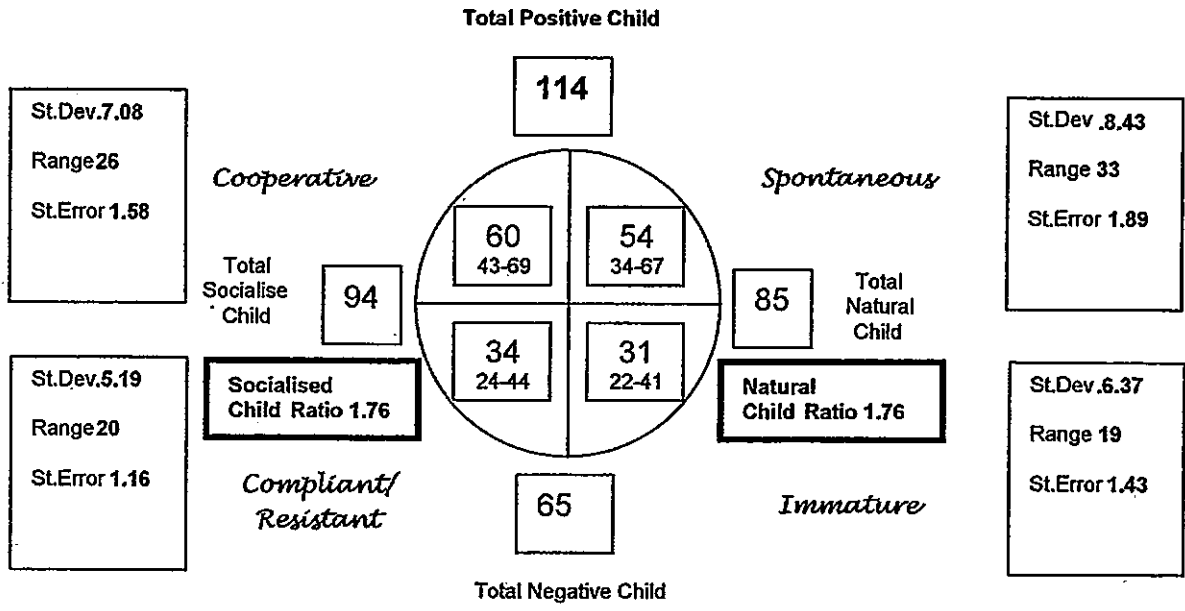
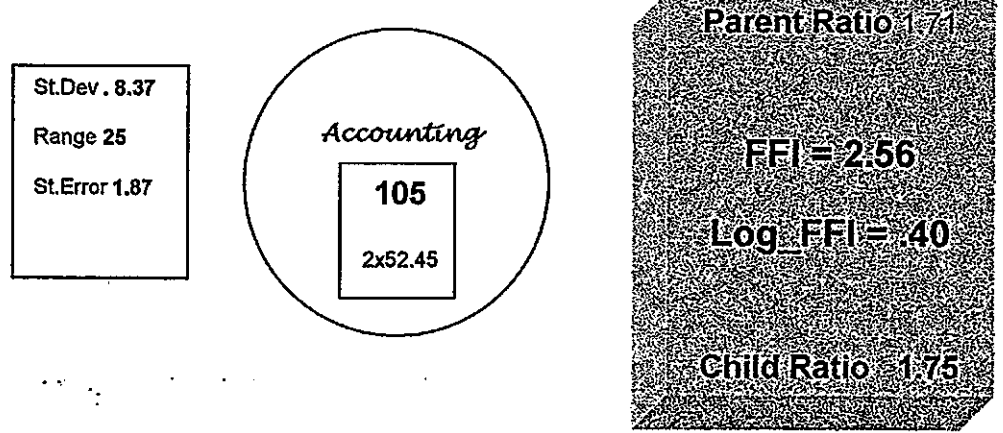
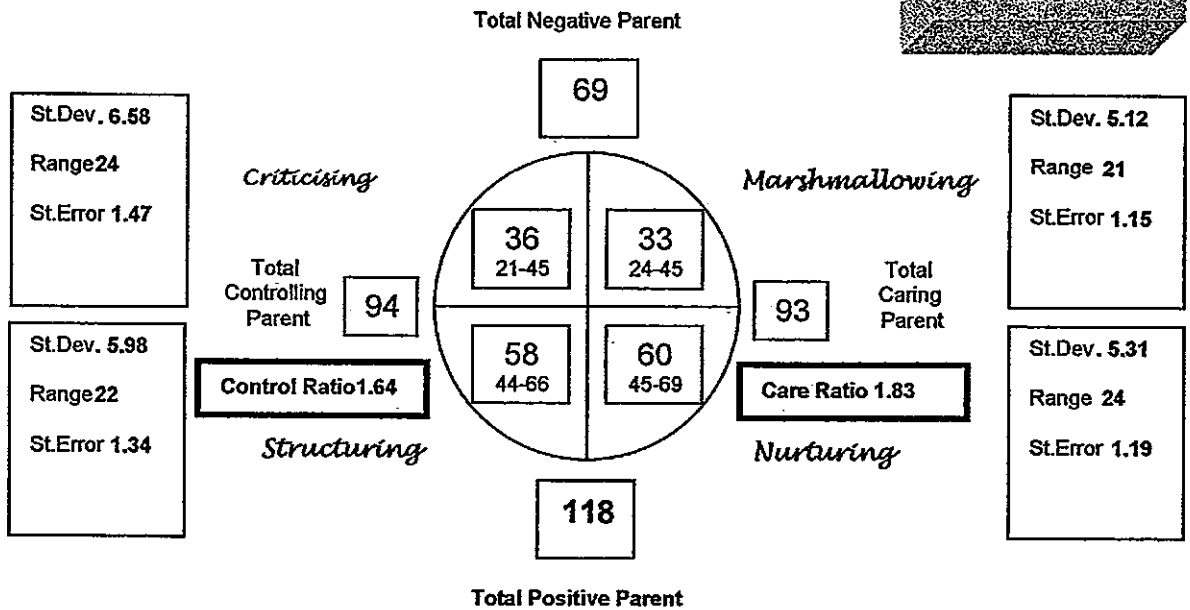
**Appendix B.11.**  
**Average Professional Responsibility Level Profile**

**MANAGER LEVEL**  
**N=140**



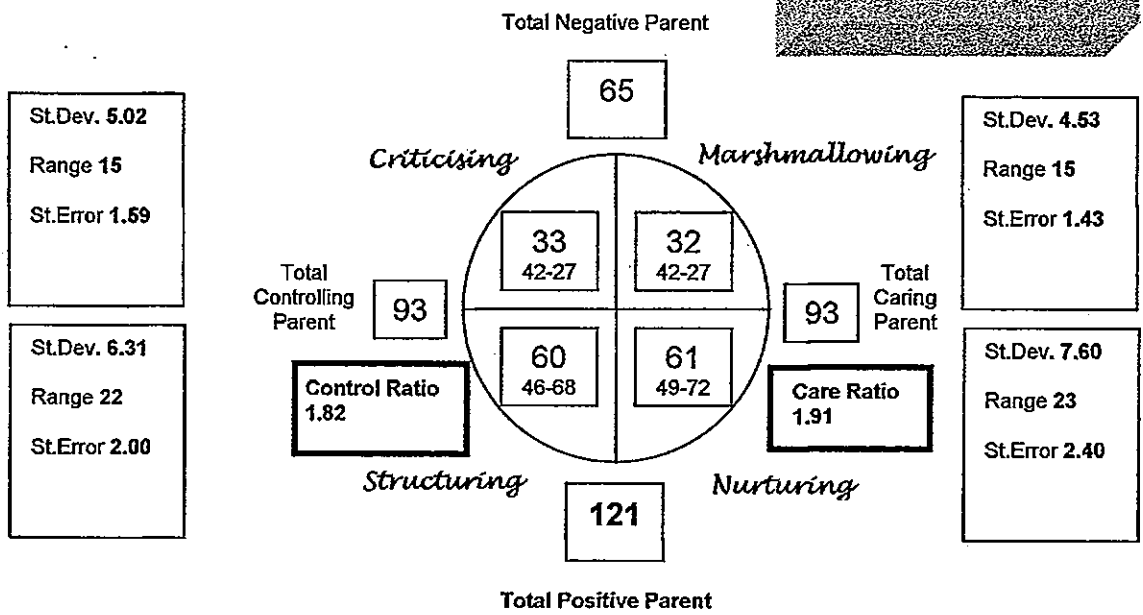
# Appendix B.12. Average Professional Responsibility Level Profile

**DIRECTOR LEVEL**  
N=20

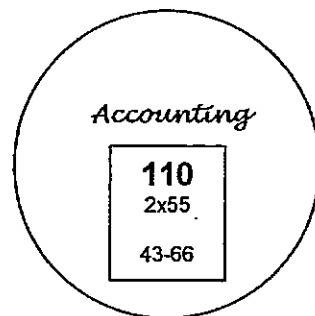


# Appendix B.13. Average Pilot Goup Profile 1

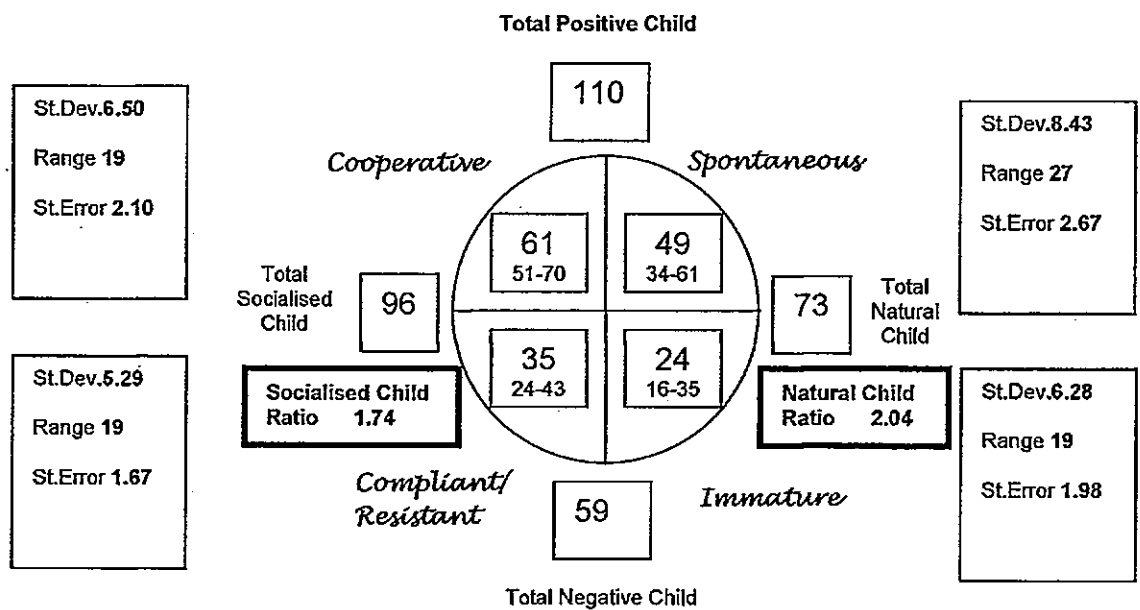
**FE Lecturers**  
N=10



St.Dev. 7.17  
Range 23  
St.Error 2.27

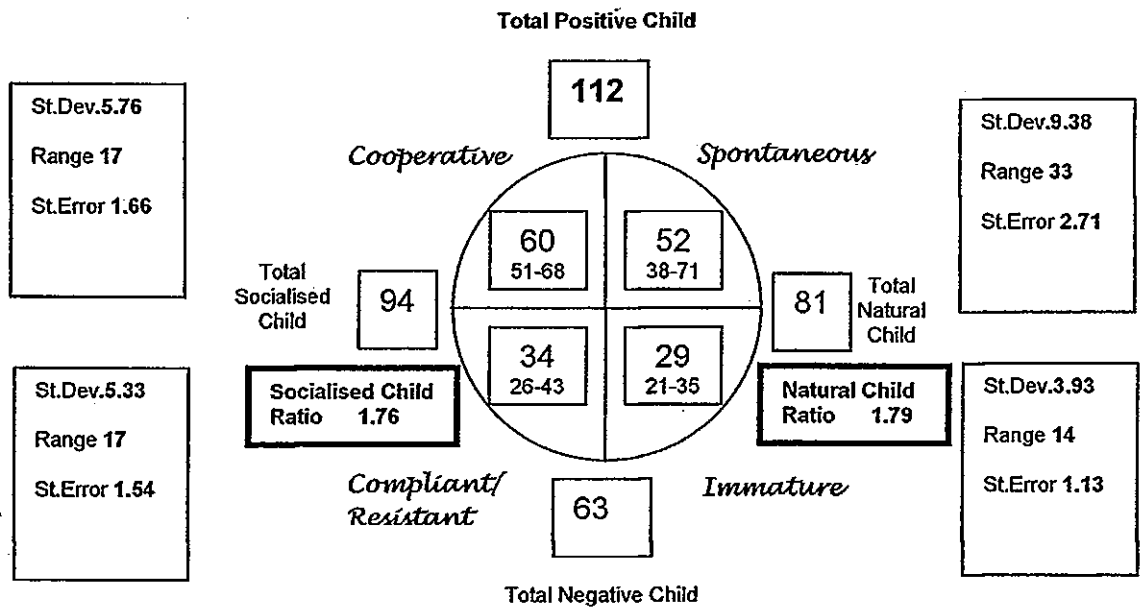
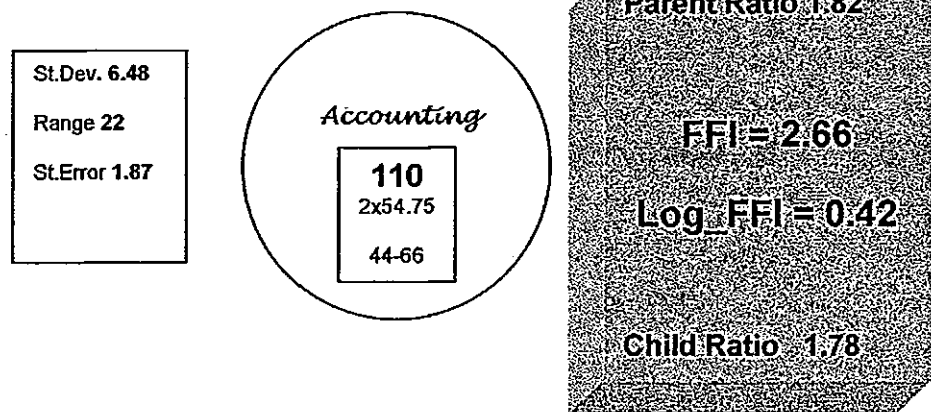
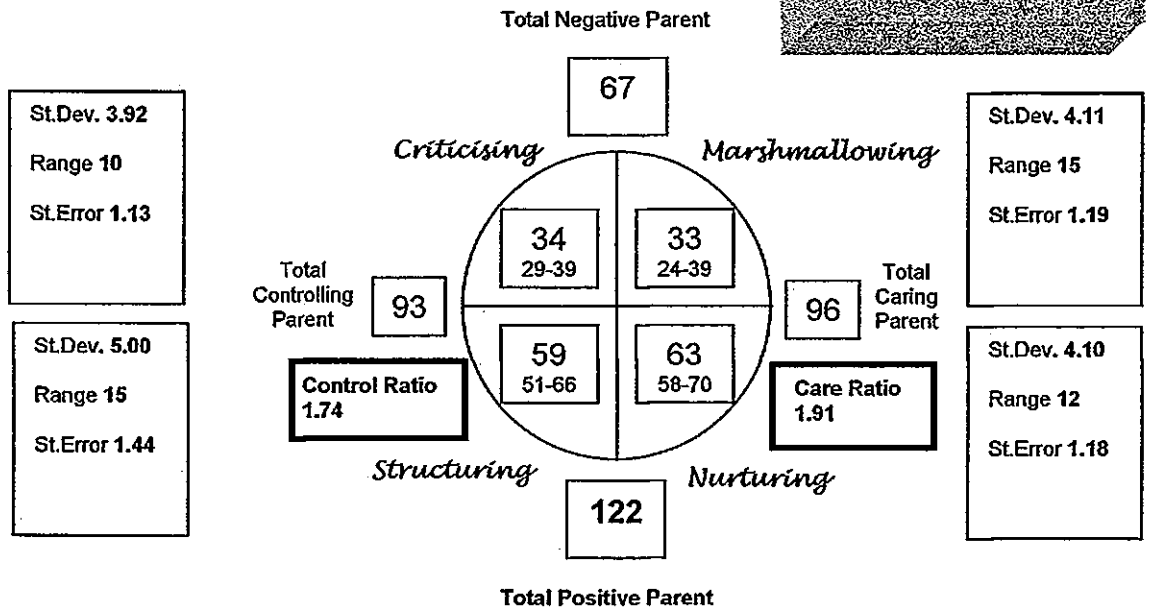


**Parent Ratio 1.86**  
**FFI = 2.79**  
**Log\_FFI = 0.44**  
**Child Ratio 1.86**



# Appendix B.14. Average Pilot Group Profile 2

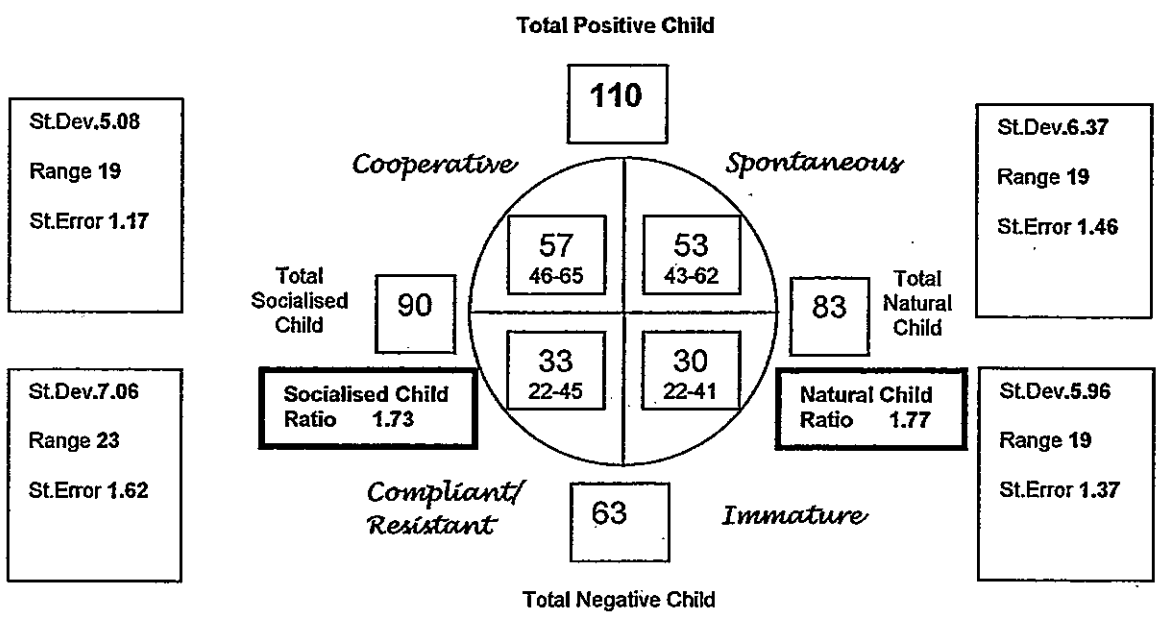
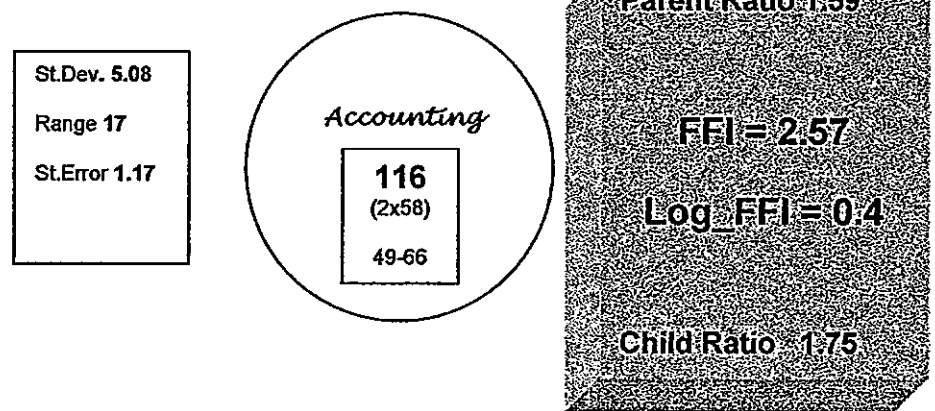
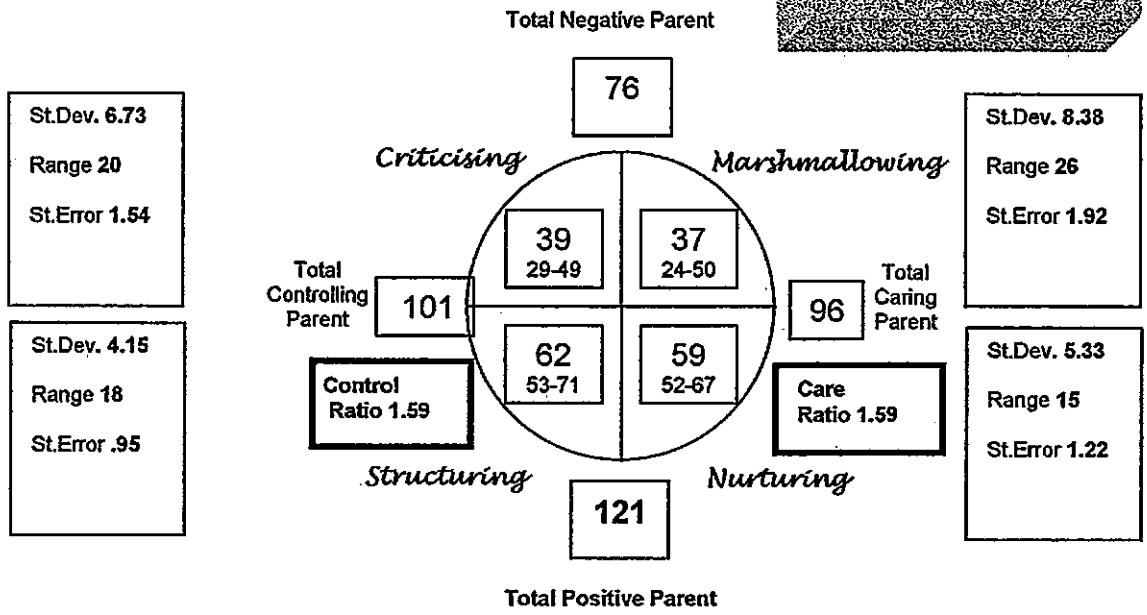
**Ed. Psychology Students**  
N=12





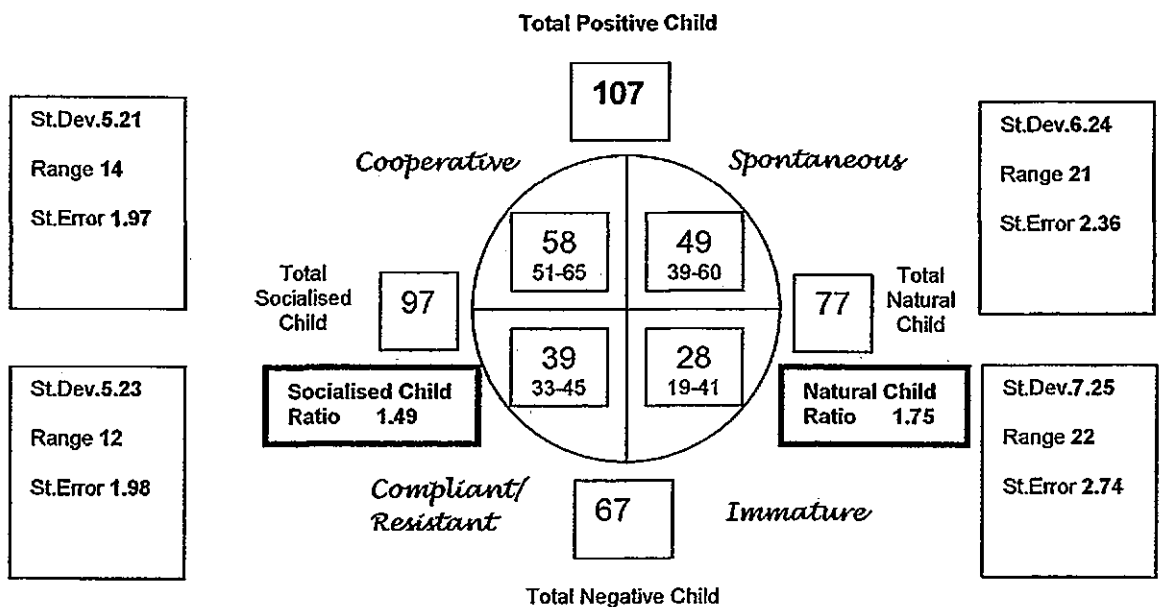
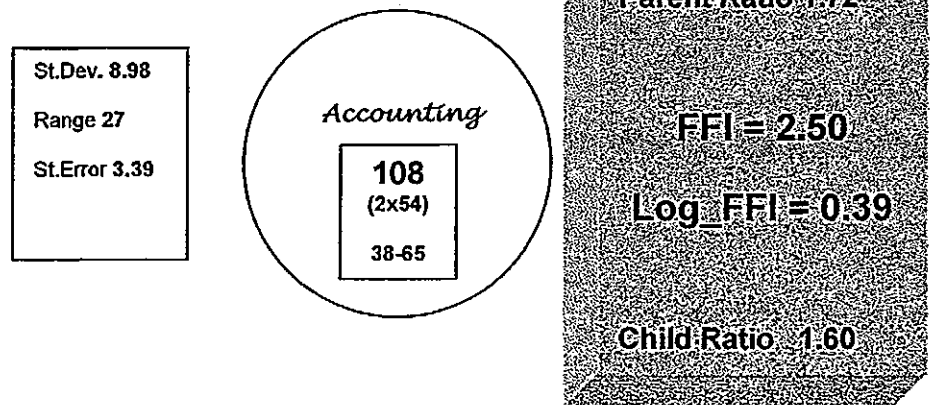
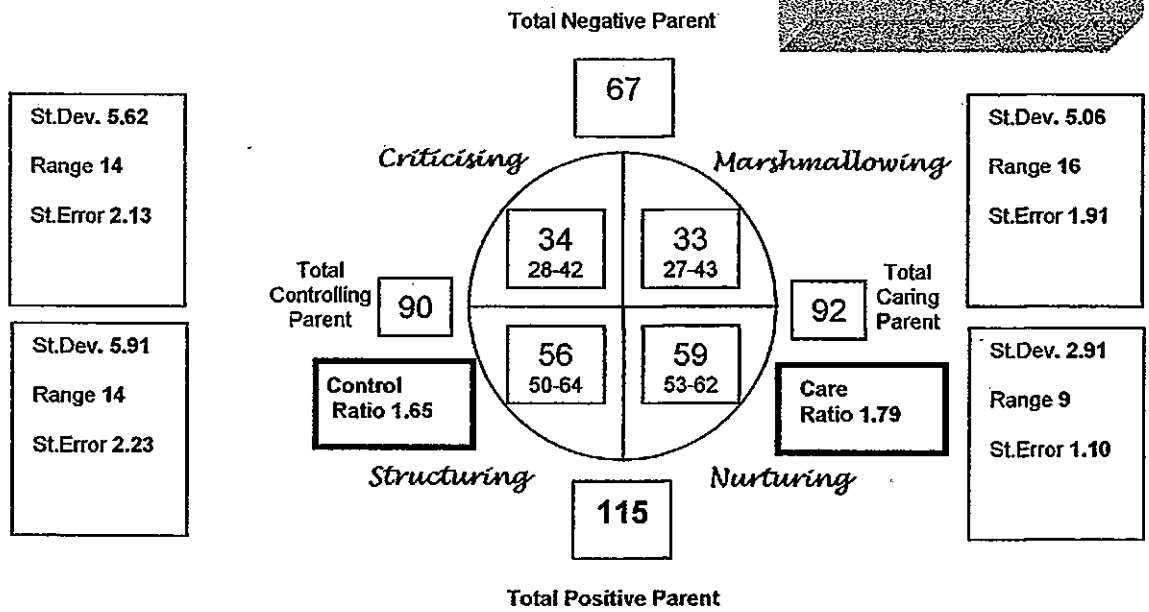
# Appendix B.15. Average Pilot Group Profile 3

**POLICE OFFICERS**  
N=19



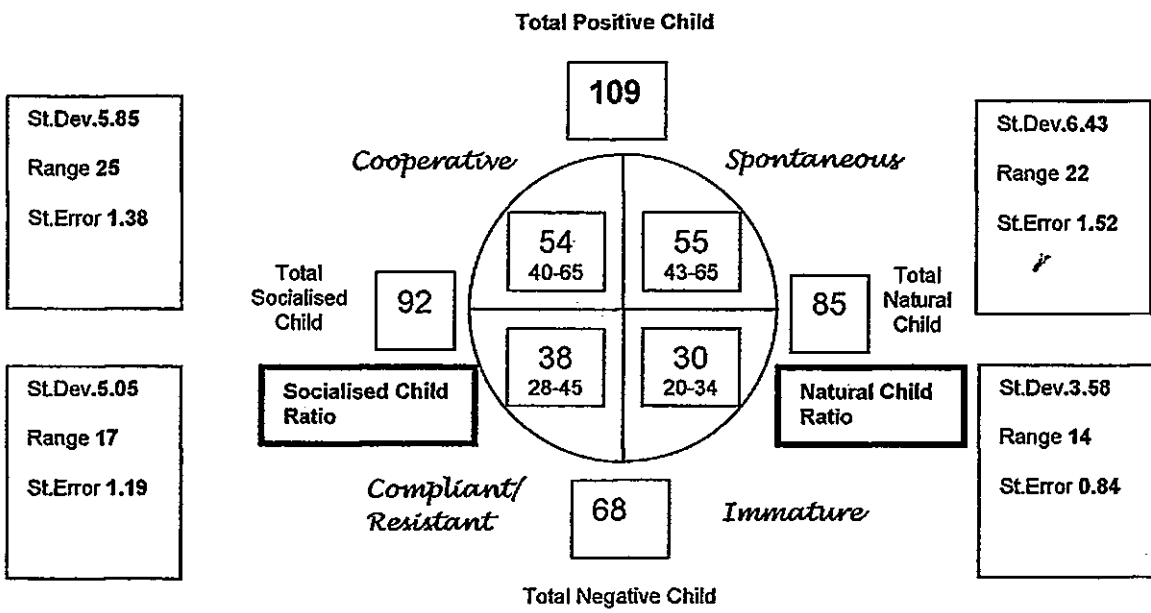
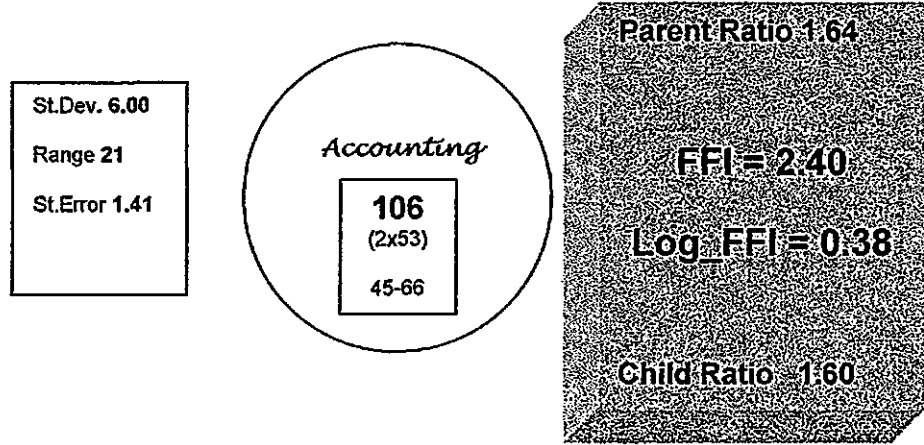
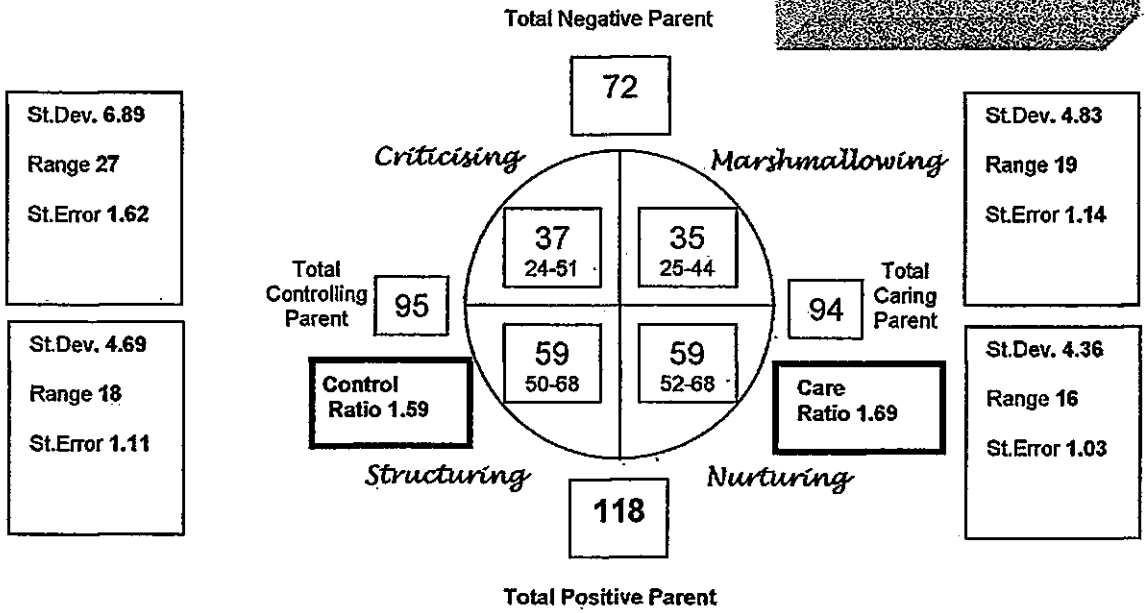
# Appendix B16. Average Pilot Group Profile 4

**PSYCHOMETRIC INTERPRETERS**  
N=7



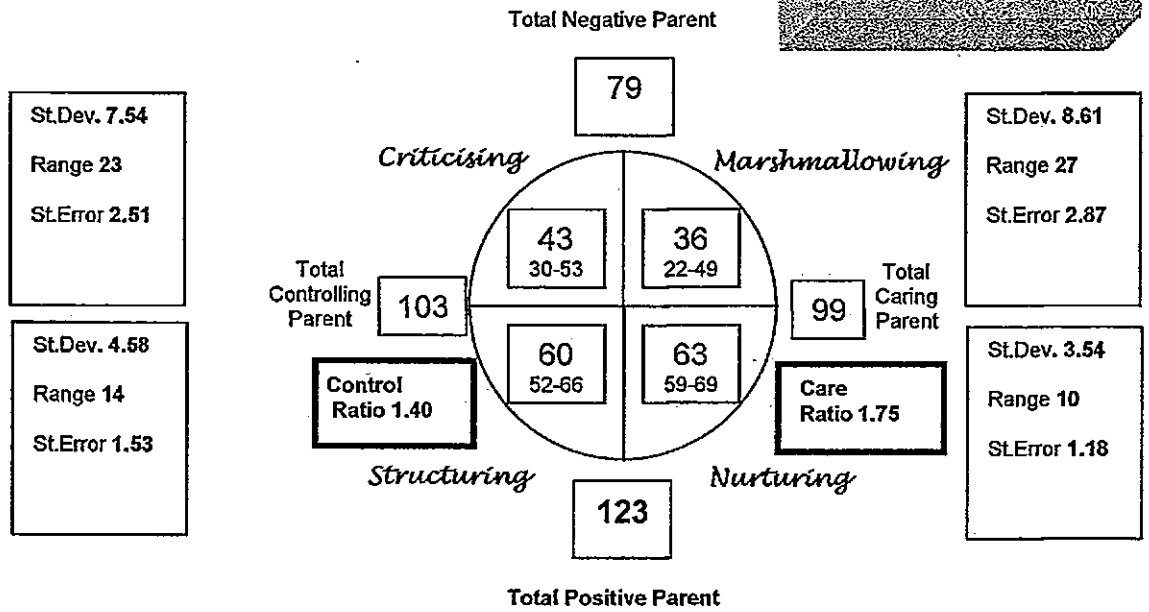
# Appendix B.17. Average Pilot Group Profile 5

**MENTAL HEALTH WORKERS**  
N=18

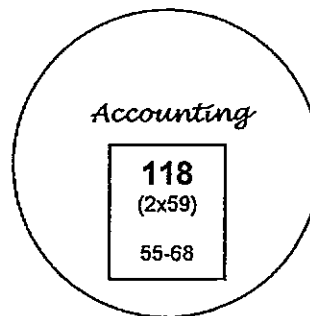


# Appendix B.18. Average Pilot Group Profile 6

**BEHAVIOUR SUPPORT TEACHERS N=9**



St.Dev. 4.29  
Range 13  
St.Error 1.43

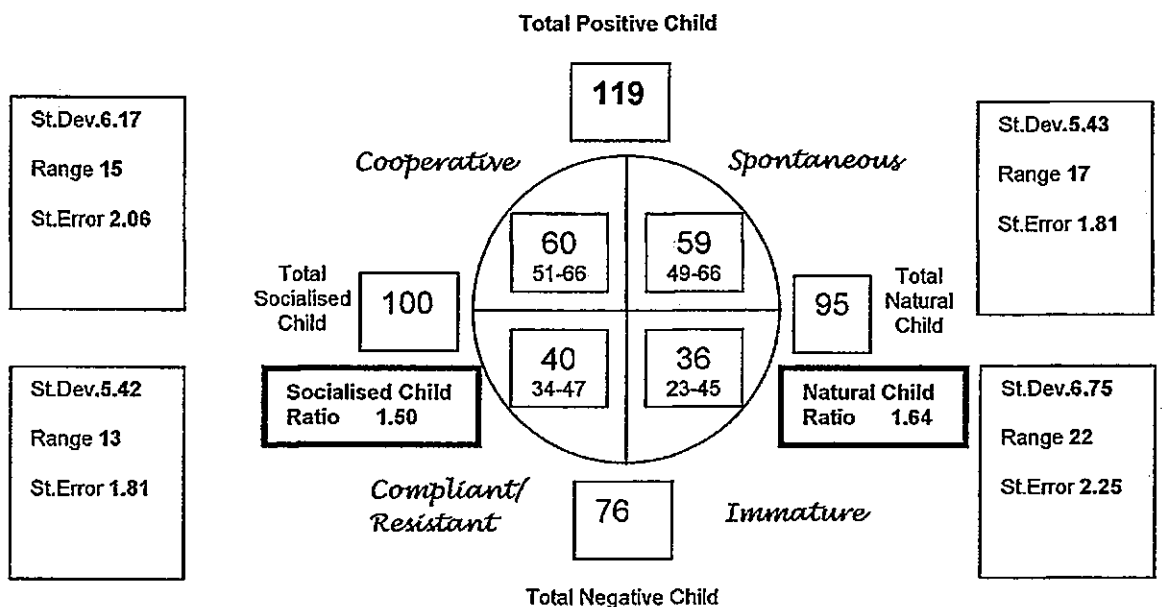


Parent Ratio 1:56

FFI = 2.34

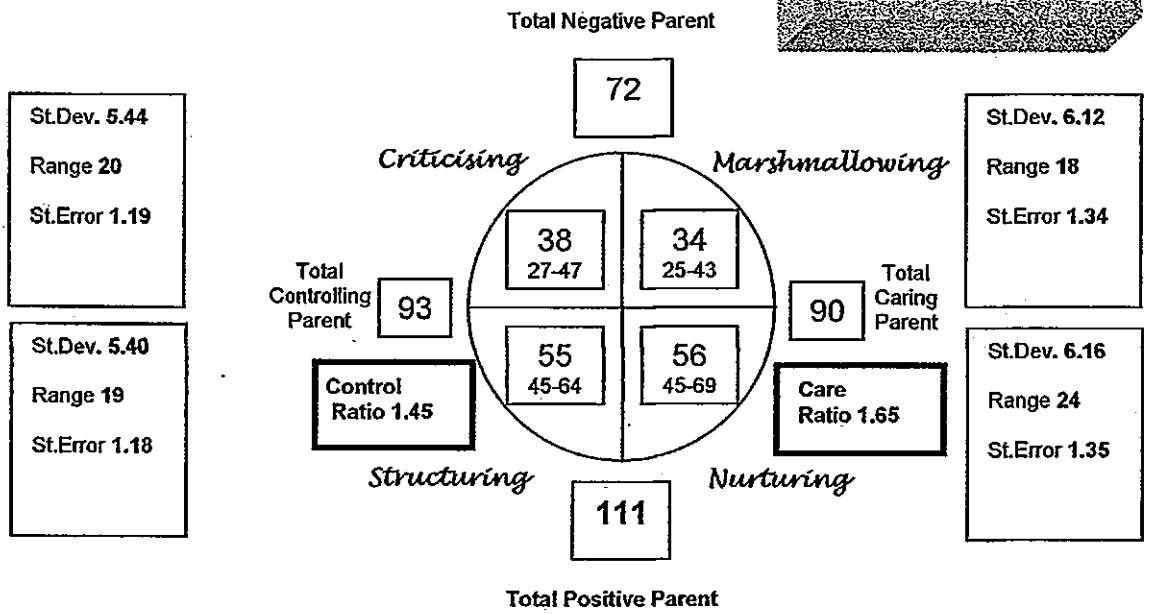
Log\_FFI = 0.37

Child Ratio 1:57

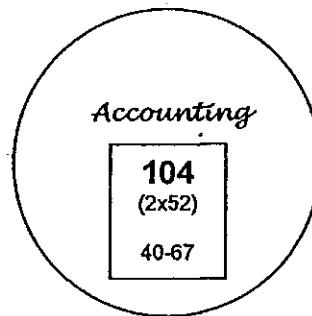


# Appendix B.19. Average Pilot Group Profile 7

**LOCAL  
AUTHORITY  
MANAGERS N=21**



St.Dev. 6.41  
Range 27  
St.Error 1.40

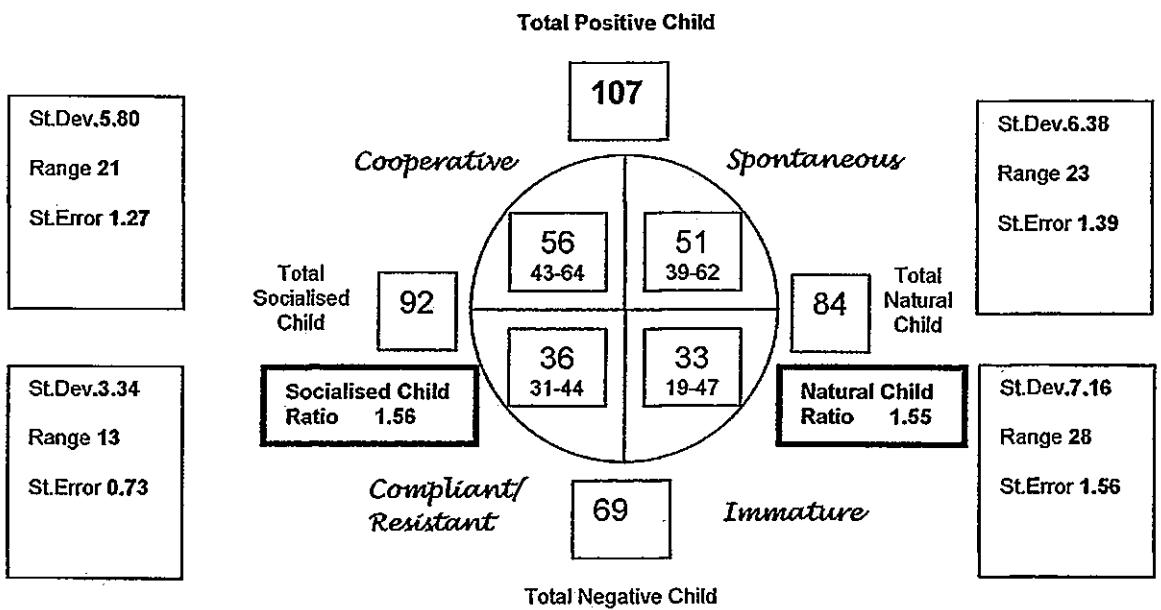


Parent Ratio 1.54

**FFI = 2.30**

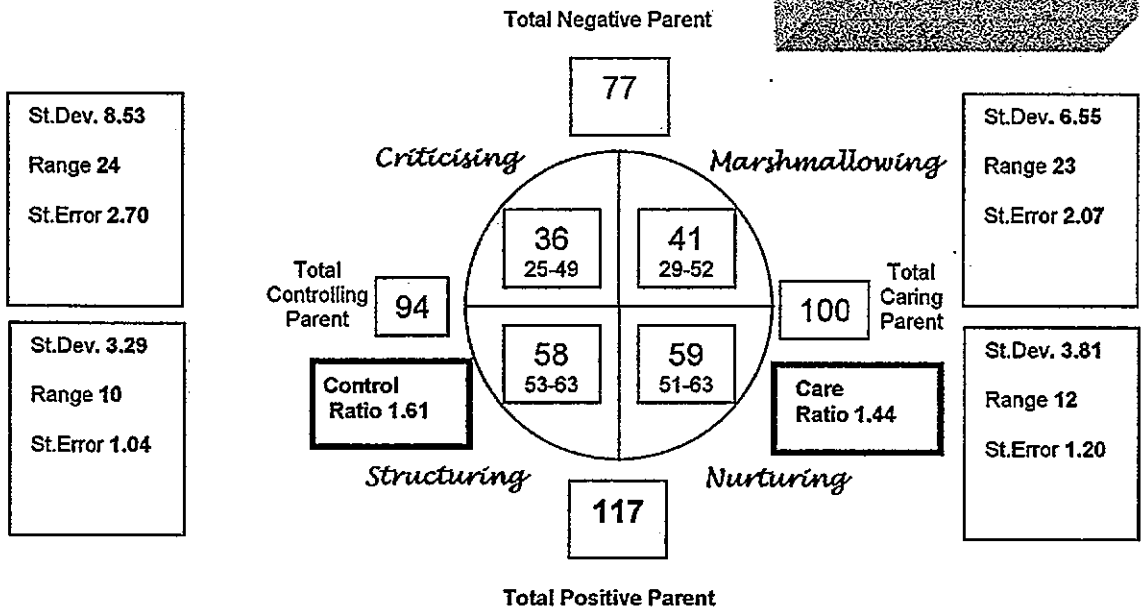
**Log\_FFI = 0.36**

Child Ratio 1.55

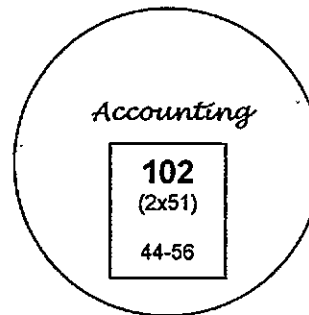


# Appendix B.20. Average Pilot Group Profile 8

**PSYCHIATRIC PERSONNEL**  
N=10



St.Dev. 3.24  
Range 12  
St.Error 1.02

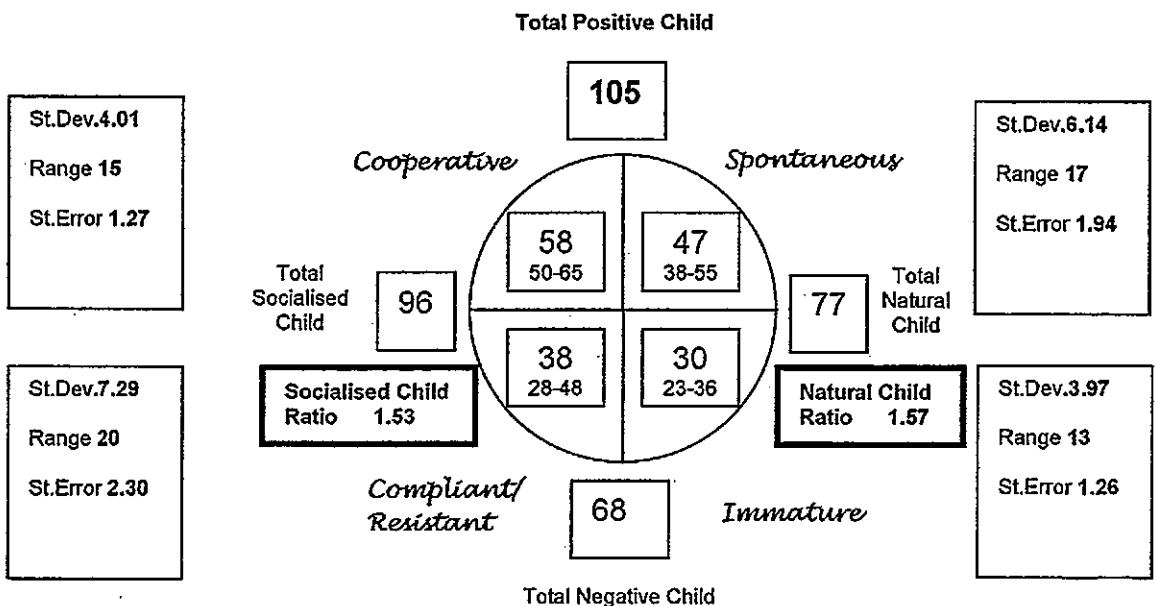


**Parent Ratio 1.2**

**FFI = 2.25**

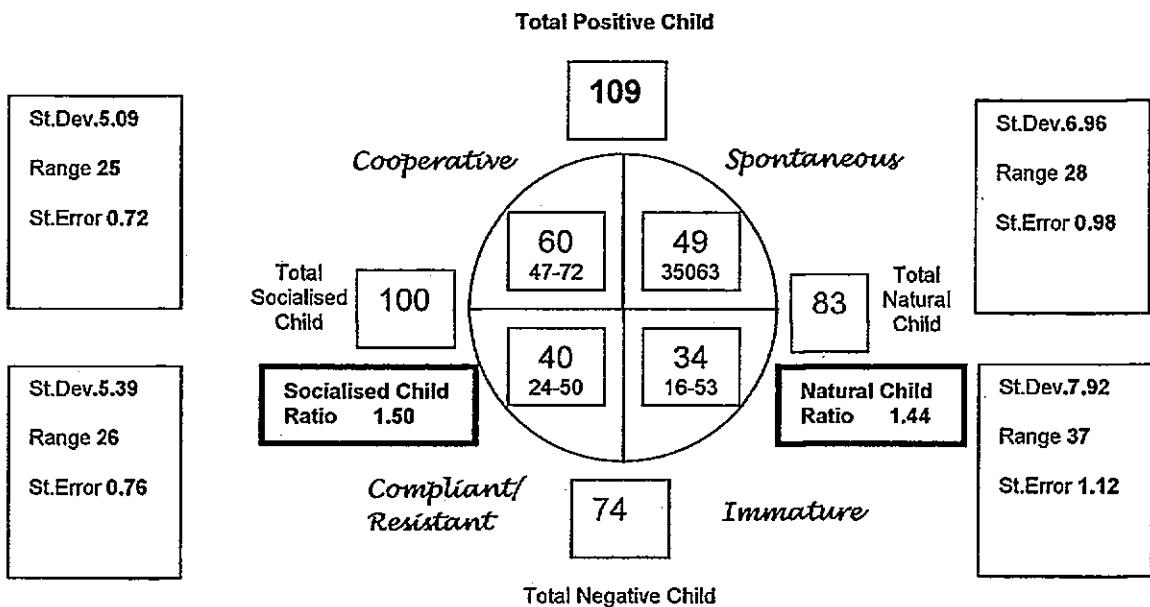
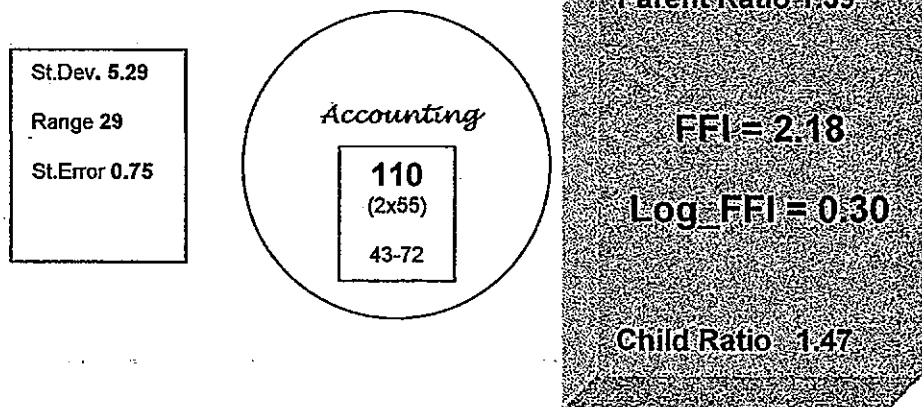
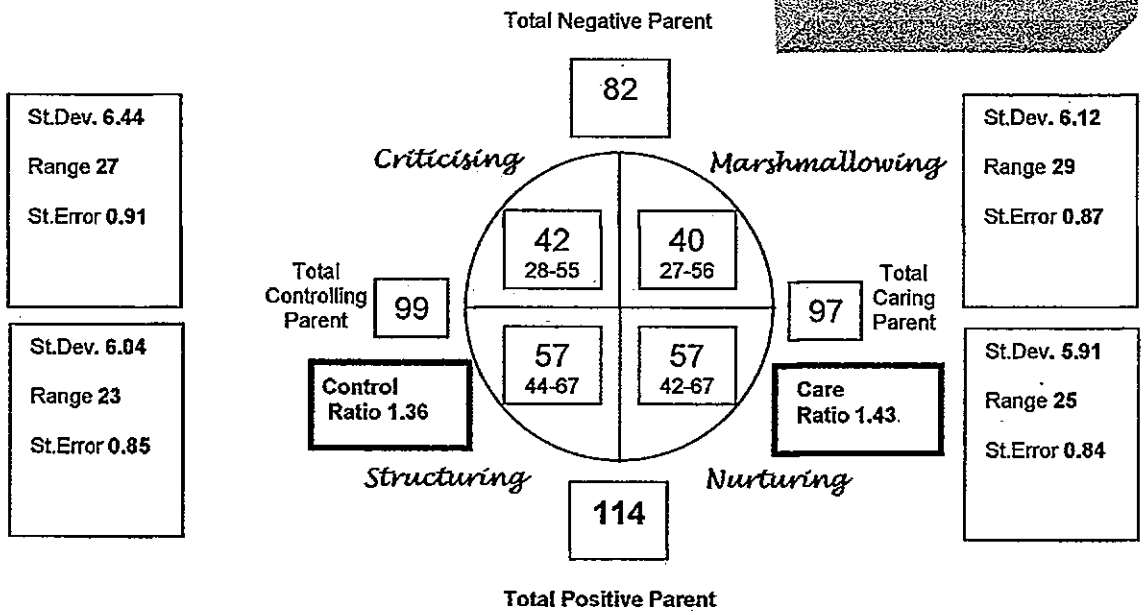
**Log\_FFI = 0.35**

**Child Ratio 1.54**



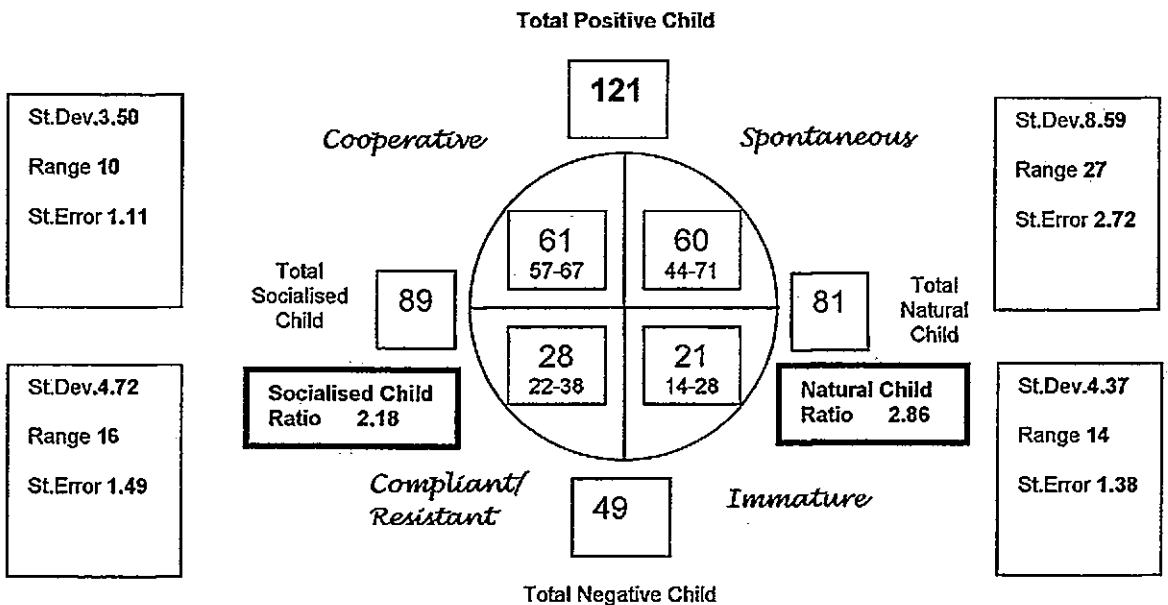
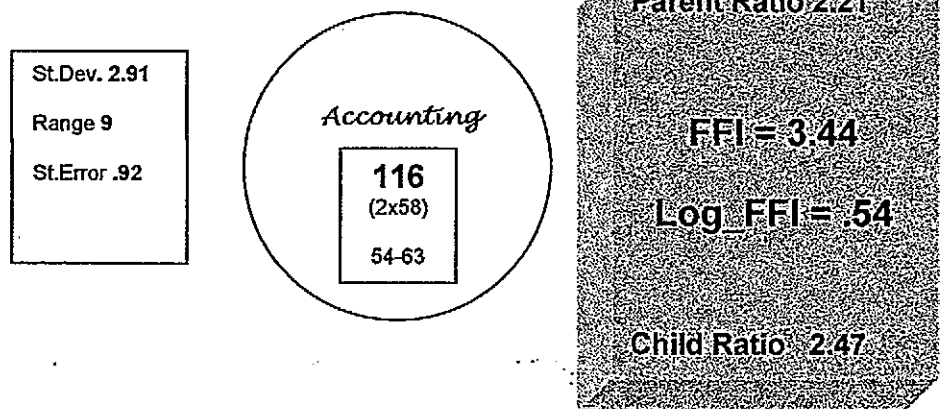
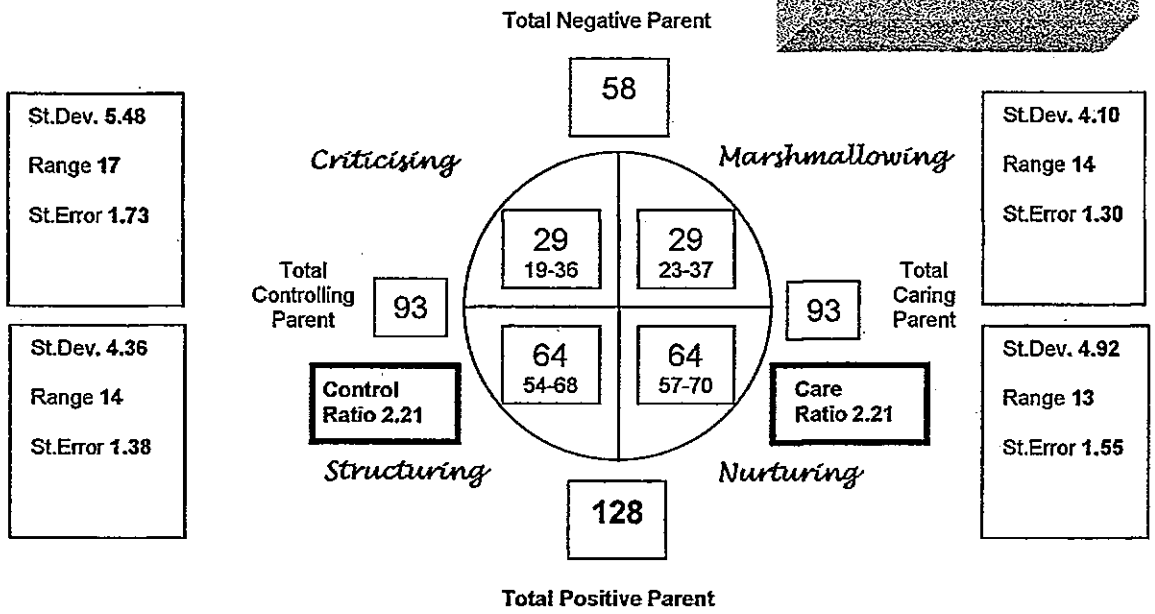
# Appendix B.21. Average Pilot Group Profile 9

**CATERING STUDENTS**  
N=50



**Appendix B.22.**  
**Average Highest Scoring Group Profile**

**Highest Group**  
 N=10



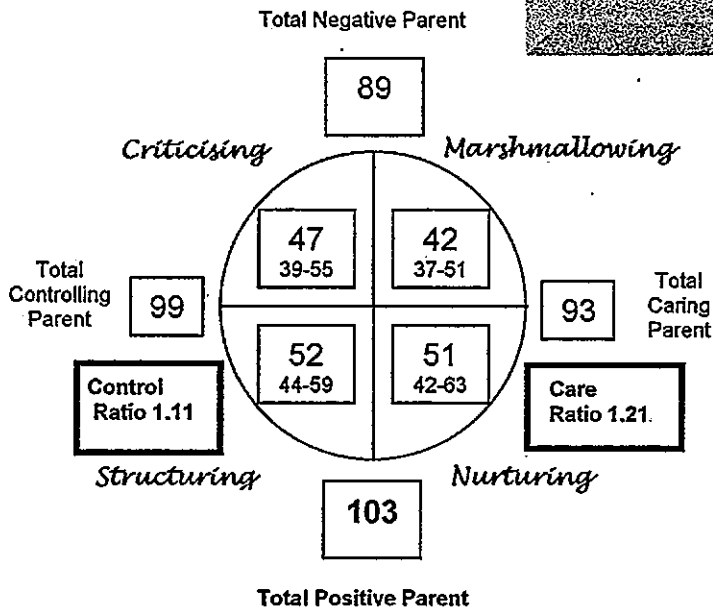


**Appendix B.23.**  
**Average Lowest Scoring Group Profile**

**Lowest Group**  
 N=10

St.Dev. 5.39  
 Range 16  
 St.Error 1.70

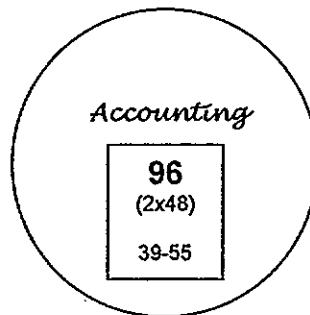
St.Dev. 5.42  
 Range 15  
 St.Error 1.71



St.Dev. 4.32  
 Range 14  
 St.Error 1.37

St.Dev. 6.39  
 Range 21  
 St.Error 2.02

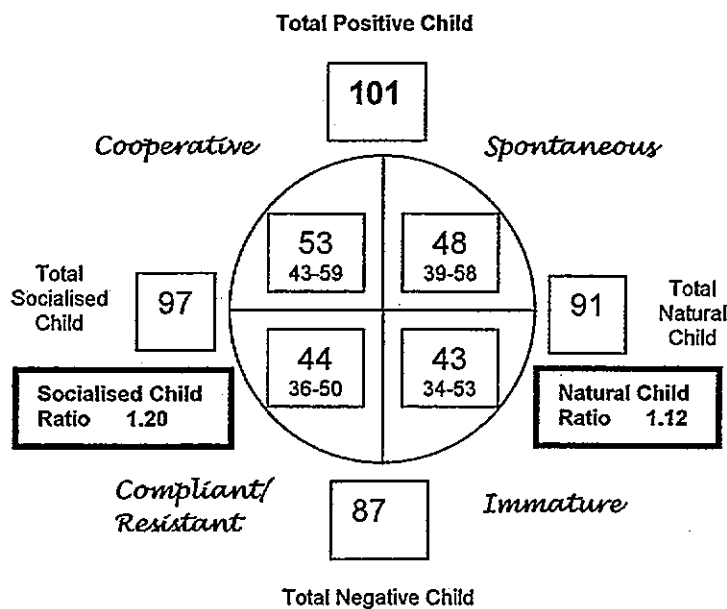
St.Dev. 5.21  
 Range 16  
 St.Error 1.65



**Parent Ratio** 1.16  
**FFI** = 1.71  
**Log\_FFI** = .23  
**Child Ratio** 1.16

St.Dev.4.90  
 Range 16  
 St.Error 1.55

St.Dev.5.05  
 Range 14  
 St.Error 1.60

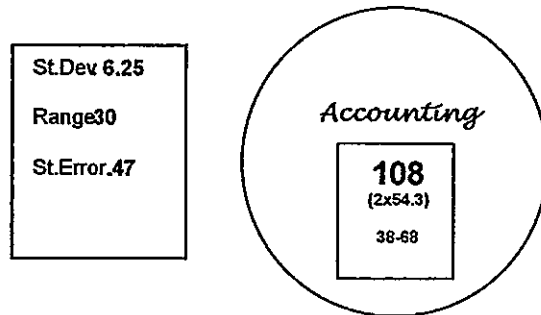
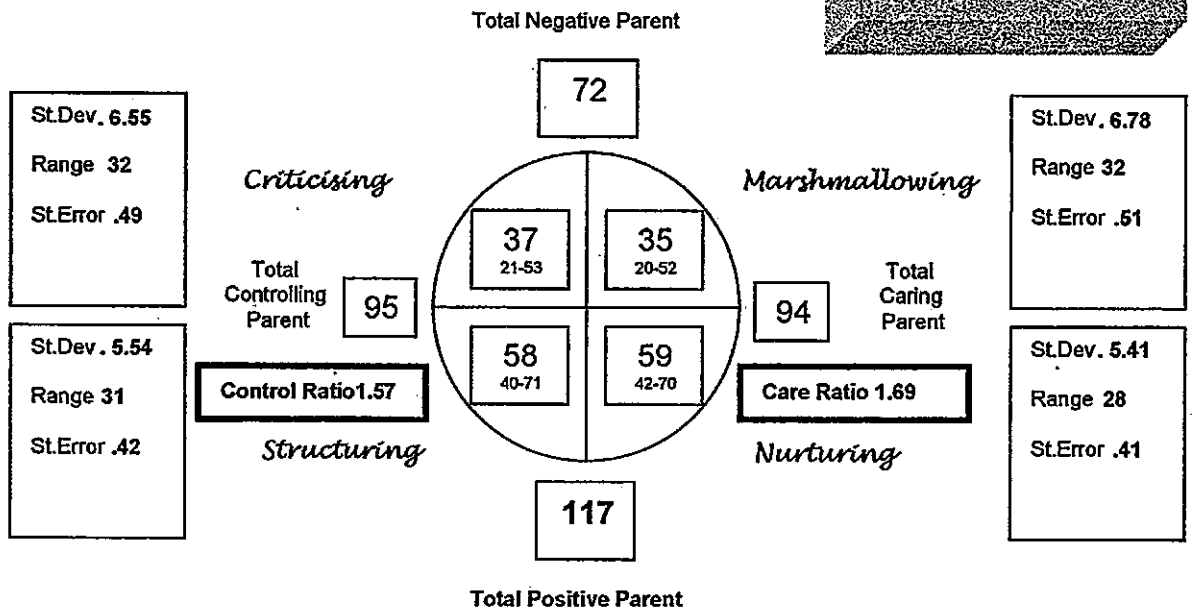


St.Dev.6.50  
 Range 19  
 St.Error 2.06

St.Dev.5.71  
 Range 19  
 St.Error 1.81

# Appendix B.24. Average Form A Profile

**FORM A**  
N=177

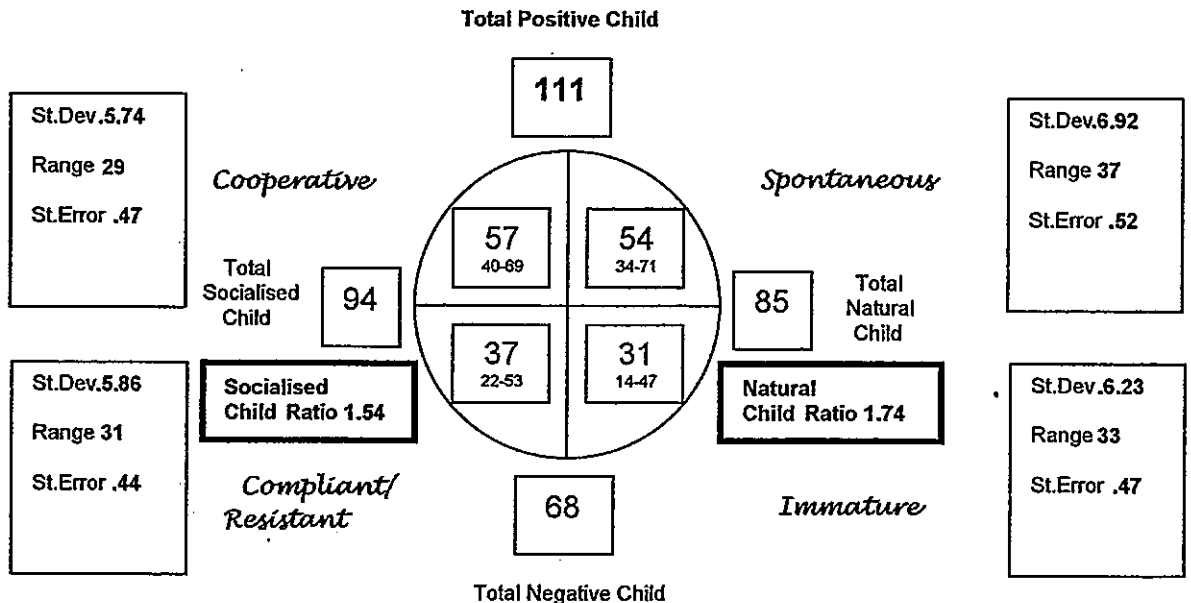


**Parent Ratio 1:62**

**FFI = 2.44**

**Log\_FFI = .383**

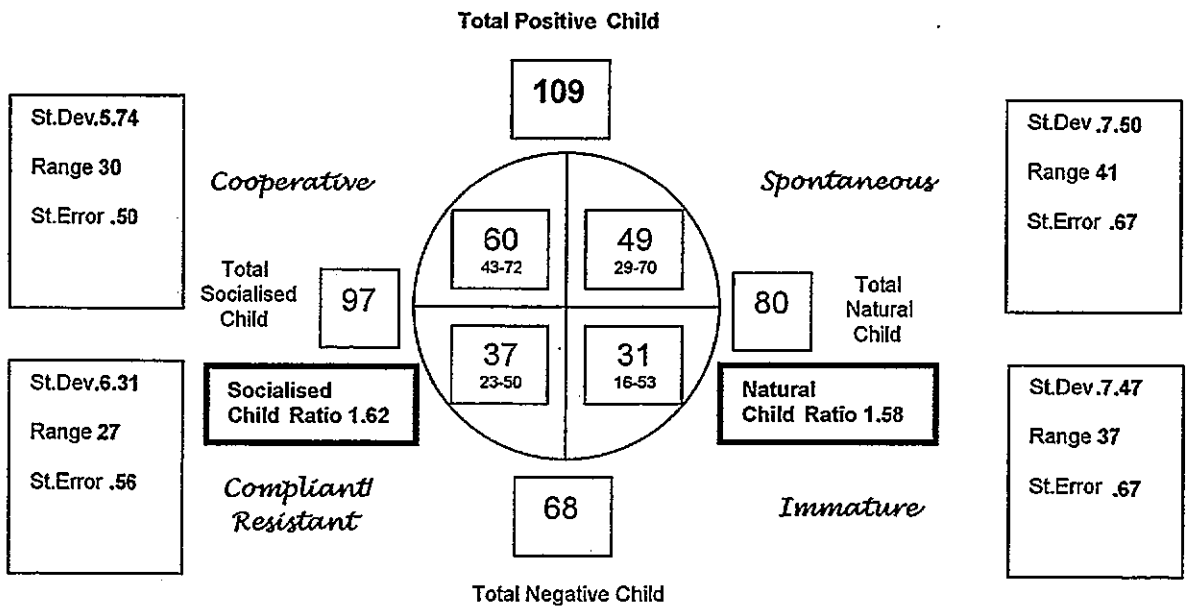
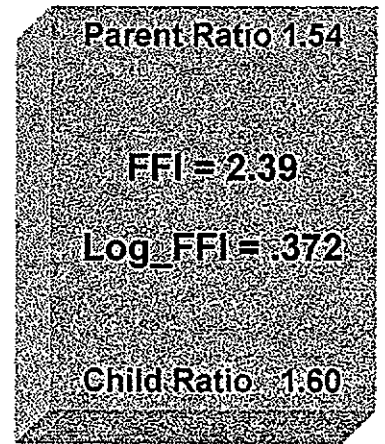
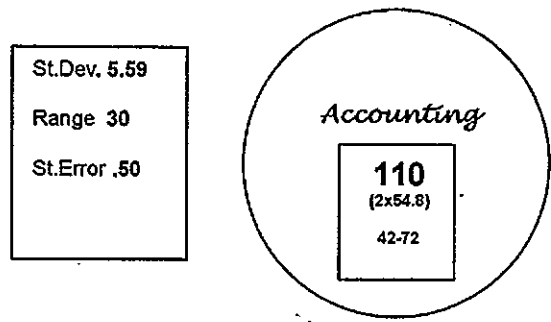
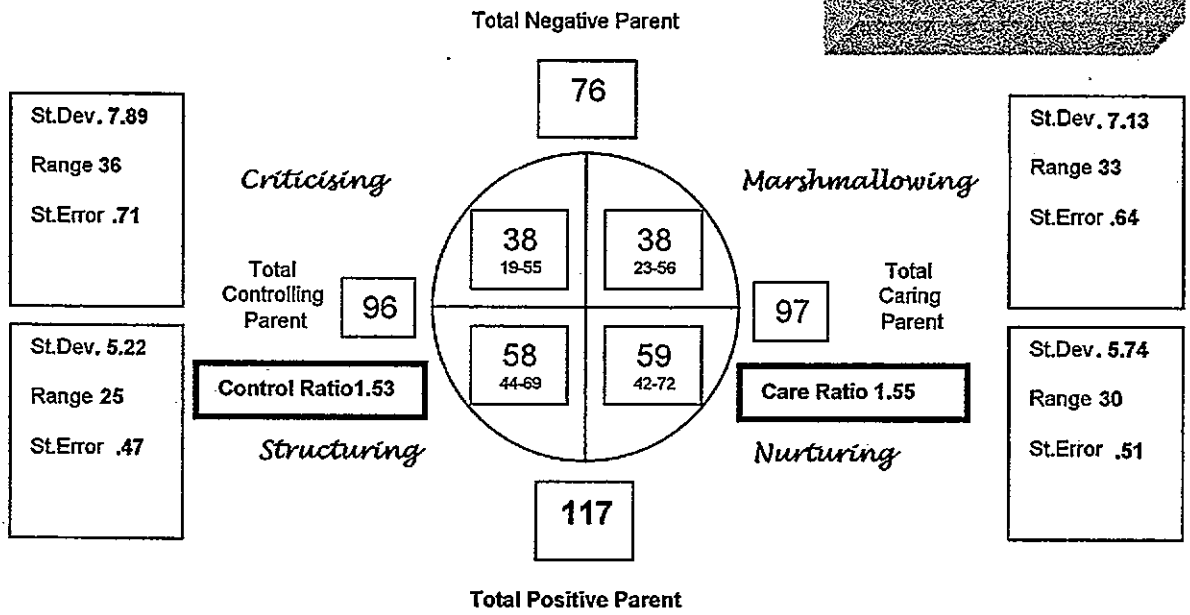
**Child Ratio 1:63**



# Appendix B.25. Average Form B Profile

**FORM B**

N=125



## Appendix C.1.

### Test Item Validation Exercise Results N = 20

1	Would you ask for feedback as to why you were not appointed for the job?	Criticising	Marshmallow	Structuring	Nurturing	Accounting	Cooperative	Spontaneous	Comp./Res.	Immature
						19	1			
2	Would you take on the job of giving the signal to start the races?	Criticising	Marshmallow	Structuring	Nurturing	Accounting	Cooperative	Spontaneous	Comp./Res.	Immature
				14		3	2	1		
3	Do you think you should deny all the children playtime when one child misbehaves?	Criticising	Marshmallow	Structuring	Nurturing	Accounting	Cooperative	Spontaneous	Comp./Res.	Immature
		17		2	1					
4	Would you make excuses for your action to someone who appears critical or judgmental?	Criticising	Marshmallow	Structuring	Nurturing	Accounting	Cooperative	Spontaneous	Comp./Res.	Immature
		1				1			17	1
5	Would you point out and appreciate the good things the others are doing?	Criticising	Marshmallow	Structuring	Nurturing	Accounting	Cooperative	Spontaneous	Comp./Res.	Immature
				2	17	1				
6	Would you insist on careful routines for painting in case someone makes a mess or goes 'wrong'?	Criticising	Marshmallow	Structuring	Nurturing	Accounting	Cooperative	Spontaneous	Comp./Res.	Immature
		5	2	12		1				
7	On discovering sweets stolen by your ten year old, would you then go back to the shop yourself to return the goods and apologise?	Criticising	Marshmallow	Structuring	Nurturing	Accounting	Cooperative	Spontaneous	Comp./Res.	Immature
		1	12	2		2	1		2	
8	Would you tell a grown-up person they are silly to be afraid of the matches?	Criticising	Marshmallow	Structuring	Nurturing	Accounting	Cooperative	Spontaneous	Comp./Res.	Immature
		16					1		1	2
9	Would you notice that the noise of the car engine has changed?	Criticising	Marshmallow	Structuring	Nurturing	Accounting	Cooperative	Spontaneous	Comp./Res.	Immature
						19		1		
10	Would you show appreciation of the beginner's achievements, however small?	Criticising	Marshmallow	Structuring	Nurturing	Accounting	Cooperative	Spontaneous	Comp./Res.	Immature
				3	17					
11	Would you have your medicine cupboard fitted with child-proof locks?	Criticising	Marshmallow	Structuring	Nurturing	Accounting	Cooperative	Spontaneous	Comp./Res.	Immature
				8	3	9				
12	Would you move up a seat so that the two friends can sit together?	Criticising	Marshmallow	Structuring	Nurturing	Accounting	Cooperative	Spontaneous	Comp./Res.	Immature
					5		13		2	
13	Would you mostly choose to be with other people?	Criticising	Marshmallow	Structuring	Nurturing	Accounting	Cooperative	Spontaneous	Comp./Res.	Immature
							17	3		



29	Would you notice what the new fashions are?	Criticising	Marshmallow	Structuring	Nurturing	Accounting	Cooperative	Spontaneous	Comp./Res.	Immature
						8	2	8	2	
30	Would you match your walking pace to that of your companion?	Criticising	Marshmallow	Structuring	Nurturing	Accounting	Cooperative	Spontaneous	Comp./Res.	Immature
			1		4		13		2	
31	Would you agree to be chair of the committee?	Criticising	Marshmallow	Structuring	Nurturing	Accounting	Cooperative	Spontaneous	Comp./Res.	Immature
			1	13		2	3		1	
32	Would you continue to talk to the cashier even though the queue is getting longer and longer?	Criticising	Marshmallow	Structuring	Nurturing	Accounting	Cooperative	Spontaneous	Comp./Res.	Immature
			1				1	1	1	16
33	Would you drive through an agreement to do things your own way?	Criticising	Marshmallow	Structuring	Nurturing	Accounting	Cooperative	Spontaneous	Comp./Res.	Immature
		8	1						3	8
34	Would you hold the heavy shopping bag so your friend can find the purse?	Criticising	Marshmallow	Structuring	Nurturing	Accounting	Cooperative	Spontaneous	Comp./Res.	Immature
				1	6		13			
35	Would you be reluctant to share your brand new felt-tip pens with anyone?	Criticising	Marshmallow	Structuring	Nurturing	Accounting	Cooperative	Spontaneous	Comp./Res.	Immature
						1	1	1	1	16
36	Would you allow the person as much time off work as needed after their mother's death?	Criticising	Marshmallow	Structuring	Nurturing	Accounting	Cooperative	Spontaneous	Comp./Res.	Immature
			4		16					
37	Would you refuse all applications after the deadline, as you said you would?	Criticising	Marshmallow	Structuring	Nurturing	Accounting	Cooperative	Spontaneous	Comp./Res.	Immature
		1		17		1			1	
38	Would you warm the beds ready for visitors arriving late on a cold night?	Criticising	Marshmallow	Structuring	Nurturing	Accounting	Cooperative	Spontaneous	Comp./Res.	Immature
			1		17	1	1			
39	If you witnessed a mugging, would you take command and order the attacker to stop?	Criticising	Marshmallow	Structuring	Nurturing	Accounting	Cooperative	Spontaneous	Comp./Res.	Immature
				16		1		1		2
40	Would you compare the results with those of previous years in order to come to a conclusion?	Criticising	Marshmallow	Structuring	Nurturing	Accounting	Cooperative	Spontaneous	Comp./Res.	Immature
						20				
41	Would you stand up to watch the performance, blocking the view for those behind?	Criticising	Marshmallow	Structuring	Nurturing	Accounting	Cooperative	Spontaneous	Comp./Res.	Immature
							1			19
42	Hearing the stair creak, would you think of all sorts of reasons for the noise?	Criticising	Marshmallow	Structuring	Nurturing	Accounting	Cooperative	Spontaneous	Comp./Res.	Immature
						6		7	5	2
43	Would you happily take on the increased challenges of a new job?	Criticising	Marshmallow	Structuring	Nurturing	Accounting	Cooperative	Spontaneous	Comp./Res.	Immature
				2		6	4	8		

44	Although upset by the accident, would you remember to take witness names and addresses?	Criticising	Marshmallow	Structuring 3	Nurturing	Accounting 17	Cooperative	Spontaneous	Comp./Res.	Immature
45	Would you sit up attentively while the rules are explained?	Criticising	Marshmallow	Structuring	Nurturing	Accounting 15	Cooperative 3	Spontaneous	Comp./Res. 2	Immature
46	Would you go along with your companion's decision on where to go for the holiday?	Criticising	Marshmallow 2	Structuring	Nurturing	Accounting	Cooperative 3	Spontaneous 1	Comp./Res. 14	Immature
47	Would you go swimming alone in the rough sea?	Criticising	Marshmallow 1	Structuring	Nurturing	Accounting	Cooperative	Spontaneous	Comp./Res.	Immature 19
48	Would you peep behind the door to see what is there?	Criticising	Marshmallow	Structuring	Nurturing	Accounting	Cooperative	Spontaneous 16	Comp./Res. 3	Immature 1
49	Would you find it hard to be bothered to take your sick friend to hospital, even though you are free?	Criticising 1	Marshmallow	Structuring	Nurturing	Accounting	Cooperative	Spontaneous	Comp./Res. 1	Immature 18
50	Would you make the load easier to carry by suspending it from two poles?	Criticising	Marshmallow	Structuring 1	Nurturing	Accounting 14	Cooperative	Spontaneous 5	Comp./Res.	Immature
51	Would you delay giving news to an accident victim of the death of her companion until she is stronger?	Criticising	Marshmallow 5	Structuring 1	Nurturing 14	Accounting	Cooperative	Spontaneous	Comp./Res.	Immature
52	Would you ask all sorts of questions to find out more about the situation?	Criticising	Marshmallow	Structuring	Nurturing	Accounting 19	Cooperative	Spontaneous 1	Comp./Res.	Immature
53	Would you go through the traffic lights as they turn red?	Criticising	Marshmallow	Structuring	Nurturing	Accounting	Cooperative	Spontaneous	Comp./Res.	Immature 20
54	Would you impose your own agenda on the committee without consultation?	Criticising 15	Marshmallow	Structuring	Nurturing	Accounting	Cooperative	Spontaneous	Comp./Res. 1	Immature 4
55	Would you teach the child the safe way to cross the road?	Criticising	Marshmallow	Structuring 11	Nurturing 8	Accounting 1	Cooperative	Spontaneous	Comp./Res.	Immature
56	Would you welcome the new person into the group?	Criticising	Marshmallow	Structuring	Nurturing 12	Accounting	Cooperative 8	Spontaneous	Comp./Res.	Immature
57	Would you talk passionately about your hobby to young people, motivating them to have a go?	Criticising	Marshmallow	Structuring 8	Nurturing 2	Accounting	Cooperative	Spontaneous 10	Comp./Res.	Immature
58	Would you make sure each person has a life jacket on for canoeing down the river?	Criticising	Marshmallow	Structuring 14	Nurturing 3	Accounting 3	Cooperative	Spontaneous	Comp./Res.	Immature

59	Would you put on thick leather gloves,while cutting back the brambles?	Criticising	Marshmallow	Structuring 3	Nurturing 5	Accounting 12	Cooperative	Spontaneous	Comp./Res.	Immature
60	Would you remember friends' birthdays and anniversaries with a special celebration.?	Criticising	Marshmallow	Structuring	Nurturing 15	Accounting	Cooperative 1	Spontaneous 4	Comp./Res.	Immature
61	Would you give yourself a hard time for failing to solve the problem?	Criticising 19	Marshmallow	Structuring	Nurturing	Accounting	Cooperative	Spontaneous	Comp./Res. 1	Immature
62	Would you find it hard to believe that your opinions matter?	Criticising 1	Marshmallow	Structuring	Nurturing	Accounting	Cooperative	Spontaneous	Comp./Res. 18	Immature 1
63	Would you stay alongside the child learning to ride a bike?	Criticising	Marshmallow 1	Structuring 3	Nurturing 15	Accounting 1	Cooperative	Spontaneous	Comp./Res.	Immature
64	Would you cheer on your team from the sidelines?	Criticising	Marshmallow	Structuring 4	Nurturing 4	Accounting	Cooperative 5	Spontaneous 6	Comp./Res. 1	Immature
65	Would you be afraid to sleep with the window open for fear of intruders?	Criticising	Marshmallow	Structuring	Nurturing	Accounting 2	Cooperative	Spontaneous	Comp./Res. 16	Immature 2
66	Although police warnings have been given, would you go out in the car in adverse weather conditions?	Criticising	Marshmallow	Structuring	Nurturing	Accounting	Cooperative	Spontaneous	Comp./Res.	Immature 20
67	Would you put your child to bed at every sneeze to be on the safe side?	Criticising	Marshmallow 18	Structuring	Nurturing	Accounting	Cooperative	Spontaneous	Comp./Res. 1	Immature 1
68	Would you be inclined to sulk when you don't get your choice of TV programme?	Criticising	Marshmallow	Structuring	Nurturing	Accounting	Cooperative	Spontaneous	Comp./Res. 5	Immature 15
69	Would you give in to the ten year old's tantrum, for the sake of peace?	Criticising	Marshmallow 19	Structuring	Nurturing	Accounting	Cooperative	Spontaneous	Comp./Res. 1	Immature
70	Would you make it clear to the youngsters that horseplay is inappropriate at the bus stop, and must cease?	Criticising 3	Marshmallow	Structuring 17	Nurturing	Accounting	Cooperative	Spontaneous	Comp./Res.	Immature
71	Would you apologise in advance for a very slightly critical comment you want to make?	Criticising	Marshmallow 3	Structuring	Nurturing	Accounting	Cooperative	Spontaneous	Comp./Res. 17	Immature
72	Would you allow someone to get away with not paying you back a loan?	Criticising	Marshmallow 14	Structuring	Nurturing	Accounting	Cooperative	Spontaneous	Comp./Res. 6	Immature
73	Would you happily eat a different sort of breakfast when staying with friends?	Criticising	Marshmallow 1	Structuring	Nurturing	Accounting	Cooperative 18	Spontaneous 1	Comp./Res.	Immature



74	Would you gather the flowers and leaves into a beautiful arrangement?	Criticising	Marshmallow	Structuring	Nurturing	Accounting	Cooperative	Spontaneous	Comp./Res.	Immature
					1			19		
75	Even after winning the lottery, would you keep in touch with reality?	Criticising	Marshmallow	Structuring	Nurturing	Accounting	Cooperative	Spontaneous	Comp./Res.	Immature
						18		1		1
76	Would you notice the little smears left on the washed up dishes, and say something about them?	Criticising	Marshmallow	Structuring	Nurturing	Accounting	Cooperative	Spontaneous	Comp./Res.	Immature
		17				1	1			1
77	Would you spot a mistake in the typing?	Criticising	Marshmallow	Structuring	Nurturing	Accounting	Cooperative	Spontaneous	Comp./Res.	Immature
		4		5		11				
78	Would you notice that your feet are becoming cold as the temperature drops?	Criticising	Marshmallow	Structuring	Nurturing	Accounting	Cooperative	Spontaneous	Comp./Res.	Immature
					1	18		1		
79	Would you insist on how the room is to be arranged?	Criticising	Marshmallow	Structuring	Nurturing	Accounting	Cooperative	Spontaneous	Comp./Res.	Immature
		18		1						1
80	Would you think that events like thunderstorms could be caused by something you did?	Criticising	Marshmallow	Structuring	Nurturing	Accounting	Cooperative	Spontaneous	Comp./Res.	Immature
									4	16
81	Although you cannot see the board well enough, would you be reluctant to ask for help?	Criticising	Marshmallow	Structuring	Nurturing	Accounting	Cooperative	Spontaneous	Comp./Res.	Immature
									20	
82	Would you insist on walking your 15 year old to school every day?	Criticising	Marshmallow	Structuring	Nurturing	Accounting	Cooperative	Spontaneous	Comp./Res.	Immature
			20							
83	Would you give clear instructions about what to do?	Criticising	Marshmallow	Structuring	Nurturing	Accounting	Cooperative	Spontaneous	Comp./Res.	Immature
				15		5				
84	Would you like to provide limitless cream cakes for your family?	Criticising	Marshmallow	Structuring	Nurturing	Accounting	Cooperative	Spontaneous	Comp./Res.	Immature
			20							
85	At the sad farewell, would you let yourself cry?	Criticising	Marshmallow	Structuring	Nurturing	Accounting	Cooperative	Spontaneous	Comp./Res.	Immature
					2	2		16		
86	Would you negotiate calmly and firmly for a fair solution?	Criticising	Marshmallow	Structuring	Nurturing	Accounting	Cooperative	Spontaneous	Comp./Res.	Immature
				9		9	2			
87	Would you read all the reports before making a decision on buying a washing machine?	Criticising	Marshmallow	Structuring	Nurturing	Accounting	Cooperative	Spontaneous	Comp./Res.	Immature
						19			1	
88	Would you invite a new acquaintance to a meal?	Criticising	Marshmallow	Structuring	Nurturing	Accounting	Cooperative	Spontaneous	Comp./Res.	Immature
					1		15	3		1

89	Would you really want a comforting warm drink to help you recover from a stressful time?	Criticising	Marshmallow 1	Structuring	Nurturing 18	Accounting	Cooperative	Spontaneous 1	Comp./Res.	Immature
90	Would you notice that two members of the group have not spoken yet, and ask them for an opinion?	Criticising 1	Marshmallow	Structuring 3	Nurturing 9	Accounting 2	Cooperative 5	Spontaneous	Comp./Res.	Immature
91	Would you insist that the promise to the children is kept?	Criticising	Marshmallow	Structuring 17	Nurturing 2	Accounting 1	Cooperative	Spontaneous	Comp./Res.	Immature
92	Would you sit through the meeting without contributing, although you are invited to do so?	Criticising 1	Marshmallow	Structuring	Nurturing	Accounting	Cooperative	Spontaneous	Comp./Res. 18	Immature 1
93	Would you worry that your pet's loss of appetite means it is seriously ill?	Criticising	Marshmallow 5	Structuring	Nurturing 5	Accounting 2	Cooperative	Spontaneous	Comp./Res. 7	Immature 1
94	Would you be inclined to see things only from your own viewpoint?	Criticising 2	Marshmallow	Structuring	Nurturing	Accounting	Cooperative	Spontaneous	Comp./Res. 1	Immature 17
95	Would you always greet others warmly?	Criticising	Marshmallow	Structuring	Nurturing 6	Accounting	Cooperative 11	Spontaneous 3	Comp./Res.	Immature
96	Would you tell the taxi driver how to get to the airport?	Criticising 12	Marshmallow	Structuring 4	Nurturing	Accounting 2	Cooperative 1	Spontaneous	Comp./Res. 1	Immature
97	Would you sometimes walk on the right hand side of the lane, and sometimes on the left?	Criticising	Marshmallow 2	Structuring 1	Nurturing	Accounting 3	Cooperative	Spontaneous 12	Comp./Res. 2	Immature
98	Would you take it on yourself to issue instructions in a group you are just an ordinary member of?	Criticising 15	Marshmallow	Structuring 3	Nurturing	Accounting	Cooperative	Spontaneous	Comp./Res.	Immature 2
99	Would you comment on the one cupboard that has not yet been fully cleared?	Criticising 20	Marshmallow	Structuring	Nurturing	Accounting	Cooperative	Spontaneous	Comp./Res.	Immature
100	Would you insist on having to approve the slightest initiative made by other people?	Criticising 14	Marshmallow 4	Structuring	Nurturing	Accounting	Cooperative 1	Spontaneous	Comp./Res. 1	Immature
101	Would you look after the house when your neighbour is away?	Criticising	Marshmallow	Structuring 2	Nurturing 3	Accounting 1	Cooperative 14	Spontaneous	Comp./Res.	Immature
102	Would you find it difficult to keep a handy pen by the phone?	Criticising	Marshmallow 1	Structuring 1	Nurturing	Accounting 1	Cooperative	Spontaneous 1	Comp./Res. 3	Immature 13
103	After a disagreement, would you stomp out of the room and slam the door?	Criticising 1	Marshmallow	Structuring	Nurturing	Accounting	Cooperative	Spontaneous	Comp./Res. 6	Immature 13



119	Would you take the decision to evacuate the building in an emergency?	Criticising	Marshmallow	Structuring 16	Nurturing	Accounting 4	Cooperative	Spontaneous	Comp./Res.	Immature
120	Would you go rock climbing without the necessary equipment?	Criticising	Marshmallow	Structuring	Nurturing	Accounting	Cooperative	Spontaneous	Comp./Res. 1	Immature 19
121	Even though you're tired out, might you listen on to a friend who phones up wanting "a nice long chat"?	Criticising	Marshmallow 9	Structuring	Nurturing 2	Accounting	Cooperative	Spontaneous	Comp./Res. 9	Immature
122	Might you still be in the bath when the guests arrive on time for dinner?	Criticising 1	Marshmallow 1	Structuring	Nurturing	Accounting	Cooperative	Spontaneous	Comp./Res. 2	Immature 16
123	Would you compare the children's scores to see who has done best?	Criticising 16	Marshmallow	Structuring	Nurturing	Accounting 3	Cooperative	Spontaneous	Comp./Res. 1	Immature
124	Would you rig up a raft out of scraps to escape from shipwreck?	Criticising	Marshmallow	Structuring 1	Nurturing	Accounting 4	Cooperative	Spontaneous 15	Comp./Res.	Immature
125	Would you appreciate the other person's perspective?	Criticising	Marshmallow	Structuring	Nurturing 6	Accounting 4	Cooperative 10	Spontaneous	Comp./Res.	Immature
126	Would you keep your arm round the nervous old lady and lead her gently through the traffic?	Criticising	Marshmallow	Structuring	Nurturing 20	Accounting	Cooperative	Spontaneous	Comp./Res.	Immature
127	Would you draw on your energy to see a project through?	Criticising	Marshmallow	Structuring 6	Nurturing	Accounting 5	Cooperative 3	Spontaneous 6	Comp./Res.	Immature
128	Would you switch off the television when the visitor arrives?	Criticising	Marshmallow	Structuring	Nurturing 2	Accounting 3	Cooperative 13	Spontaneous	Comp./Res. 2	Immature
129	Would you take a telling off assuming the person must be right?	Criticising	Marshmallow	Structuring	Nurturing 1	Accounting	Cooperative	Spontaneous	Comp./Res. 19	Immature
130	Would you tell the children to build the sand castle a particular way?	Criticising 17	Marshmallow 1	Structuring 1	Nurturing	Accounting	Cooperative	Spontaneous	Comp./Res.	Immature 1
131	Would you always make sure to collect the children from school at the same time?	Criticising	Marshmallow	Structuring 15	Nurturing 3	Accounting 2	Cooperative	Spontaneous	Comp./Res.	Immature
132	When your child is asked a question, might you answer for them?	Criticising 4	Marshmallow 15	Structuring	Nurturing 1	Accounting	Cooperative	Spontaneous	Comp./Res.	Immature
133	Would you keep telling the expert removers what to do next to load the furniture?	Criticising 18	Marshmallow	Structuring 1	Nurturing	Accounting	Cooperative	Spontaneous	Comp./Res.	Immature 1

134	Would you hold open the door for the harassed parent with several children?	Criticising	Marshmallow	Structuring	Nurturing	Accounting	Cooperative	Spontaneous	Comp./Res.	Immature
					8		11	1		
135	Would you improvise some new verses to an old song?	Criticising	Marshmallow	Structuring	Nurturing	Accounting	Cooperative	Spontaneous	Comp./Res.	Immature
								20		
136	Might you pretend you have enough to eat when you are ill, rather than bother a neighbour.	Criticising	Marshmallow	Structuring	Nurturing	Accounting	Cooperative	Spontaneous	Comp./Res.	Immature
			2						18	
137	Would you see fantastic pictures when gazing at the clouds?	Criticising	Marshmallow	Structuring	Nurturing	Accounting	Cooperative	Spontaneous	Comp./Res.	Immature
								20		
138	Would you look around the scene, taking in and noticing every detail?	Criticising	Marshmallow	Structuring	Nurturing	Accounting	Cooperative	Spontaneous	Comp./Res.	Immature
						13		7		
139	Would you assure people that they can do really well and succeed?	Criticising	Marshmallow	Structuring	Nurturing	Accounting	Cooperative	Spontaneous	Comp./Res.	Immature
				9	10		1			
140	Might you sing with delight at the start of a new day?	Criticising	Marshmallow	Structuring	Nurturing	Accounting	Cooperative	Spontaneous	Comp./Res.	Immature
								20		
141	Would you make sure the contract is clearly stated and adhered to?	Criticising	Marshmallow	Structuring	Nurturing	Accounting	Cooperative	Spontaneous	Comp./Res.	Immature
				9		11				
142	Would you work out a system to maximise your chance to win?	Criticising	Marshmallow	Structuring	Nurturing	Accounting	Cooperative	Spontaneous	Comp./Res.	Immature
				3		13		2	1	1
143	Would you insist on doing your grownup child's washing when they come home for the weekend?	Criticising	Marshmallow	Structuring	Nurturing	Accounting	Cooperative	Spontaneous	Comp./Res.	Immature
			20							
144	Would you think of wafting a newspaper about like a fan to silence the smoke alarm?	Criticising	Marshmallow	Structuring	Nurturing	Accounting	Cooperative	Spontaneous	Comp./Res.	Immature
						2		5		13
145	Would you keep up your smiling acceptance, even though that's the third window the youngsters have broken today?	Criticising	Marshmallow	Structuring	Nurturing	Accounting	Cooperative	Spontaneous	Comp./Res.	Immature
			15						4	1
146	Would you notice signs of a change in wind direction?	Criticising	Marshmallow	Structuring	Nurturing	Accounting	Cooperative	Spontaneous	Comp./Res.	Immature
						19		1		
147	Would you agree to work late for no pay for a bullying boss?	Criticising	Marshmallow	Structuring	Nurturing	Accounting	Cooperative	Spontaneous	Comp./Res.	Immature
			1						18	1
148	Would you speak to a large gathering of people with humour and certainty.	Criticising	Marshmallow	Structuring	Nurturing	Accounting	Cooperative	Spontaneous	Comp./Res.	Immature
				6		3	7	4		

149	When really annoyed, would you go red and roar with rage?	Criticising 4	Marshmallow 1	Structuring	Nurturing	Accounting	Cooperative	Spontaneous 6	Comp./Res. 1	Immature 8
150	Would you stay with the distressed children until they are comforted?	Criticising	Marshmallow	Structuring	Nurturing 20	Accounting	Cooperative	Spontaneous	Comp./Res.	Immature
151	Would you drive without noticing the puddles, splashing the pedestrians?	Criticising	Marshmallow	Structuring	Nurturing	Accounting 1	Cooperative	Spontaneous	Comp./Res. 2	Immature 17
152	Would you seek an explanation to make sense of all the information?	Criticising	Marshmallow	Structuring	Nurturing	Accounting 19	Cooperative	Spontaneous 1	Comp./Res.	Immature
153	Would you sometimes drive safely and sometimes make silly mistakes?	Criticising	Marshmallow 4	Structuring	Nurturing	Accounting	Cooperative	Spontaneous	Comp./Res. 4	Immature 12
154	Would you be inclined to criticise the way a meal is served?	Criticising 20	Marshmallow	Structuring	Nurturing	Accounting	Cooperative	Spontaneous	Comp./Res.	Immature
155	Would you check out the facts about the rumour before taking any action?	Criticising	Marshmallow	Structuring 3	Nurturing	Accounting 17	Cooperative	Spontaneous	Comp./Res.	Immature
156	Might you send the child to bed supperless for making a mistake in the sums?	Criticising 20	Marshmallow	Structuring	Nurturing	Accounting	Cooperative	Spontaneous	Comp./Res.	Immature
157	Would you think laterally when facing a sticky problem?	Criticising	Marshmallow	Structuring	Nurturing	Accounting 8	Cooperative	Spontaneous 12	Comp./Res.	Immature
158	Would you agree to work late tonight and have tomorrow morning off?	Criticising	Marshmallow	Structuring 1	Nurturing 1	Accounting 5	Cooperative 13	Spontaneous	Comp./Res.	Immature
159	If the boss says everyone must stay on till 5.30, would you still leave at 5.10?	Criticising	Marshmallow	Structuring	Nurturing	Accounting 1	Cooperative 2	Spontaneous	Comp./Res. 14	Immature 3
160	Would you find a way not to comply with the dress requirements for the special occasion?	Criticising	Marshmallow	Structuring	Nurturing	Accounting	Cooperative 1	Spontaneous 1	Comp./Res. 16	Immature 2
161	Would you refuse to let your child go swimming in case he or she drowns?	Criticising	Marshmallow 17	Structuring	Nurturing	Accounting	Cooperative	Spontaneous	Comp./Res. 1	Immature 2
162	Although it is your friend who is ill, might you spend the time talking about your own ailments?	Criticising	Marshmallow	Structuring	Nurturing	Accounting	Cooperative	Spontaneous	Comp./Res. 1	Immature 19
163	Would you find it easier to buy all the joint Xmas presents yourself, without involving your partner in the choice?	Criticising 5	Marshmallow 7	Structuring 1	Nurturing	Accounting	Cooperative	Spontaneous	Comp./Res. 4	Immature 3

164	Would you make decisions for the other person?	Criticising 8	Marshmallow 12	Structuring	Nurturing	Accounting	Cooperative	Spontaneous	Comp./Res.	Immature
165	Would you ask for the draft report to be redone because of two spelling mistakes?	Criticising 16	Marshmallow	Structuring 4	Nurturing	Accounting	Cooperative	Spontaneous	Comp./Res.	Immature
166	Would you define an inadequate report as "no good"?	Criticising 16	Marshmallow	Structuring 2	Nurturing	Accounting 2	Cooperative	Spontaneous	Comp./Res.	Immature
167	Would you be relaxed and easy at a party?	Criticising	Marshmallow	Structuring	Nurturing	Accounting 1	Cooperative 6	Spontaneous 13	Comp./Res.	Immature
168	Would you invite everybody to a party to celebrate your success?	Criticising	Marshmallow 1	Structuring	Nurturing	Accounting	Cooperative 2	Spontaneous 13	Comp./Res.	Immature 4
169	Might you dismiss someone who repeatedly forgot things as "hopeless"?	Criticising 19	Marshmallow	Structuring	Nurturing	Accounting 1	Cooperative	Spontaneous	Comp./Res.	Immature
170	Would you hold someone's hand and go paddling with them, to help them overcome their fear of the water?	Criticising	Marshmallow	Structuring	Nurturing 18	Accounting	Cooperative 1	Spontaneous 1	Comp./Res.	Immature
171	At a time for celebration, would you dance for joy?	Criticising	Marshmallow	Structuring	Nurturing	Accounting	Cooperative	Spontaneous 20	Comp./Res.	Immature
172	Might you organise an outing without confirming the necessary transport?	Criticising	Marshmallow 2	Structuring	Nurturing	Accounting	Cooperative	Spontaneous 1	Comp./Res. 2	Immature 15
173	Would you tell the crowds to stand back so the doctor can reach the scene of the accident?	Criticising	Marshmallow	Structuring 17	Nurturing	Accounting 3	Cooperative	Spontaneous	Comp./Res.	Immature
174	Would you run along the beach and splash in the waves?	Criticising	Marshmallow	Structuring	Nurturing	Accounting	Cooperative	Spontaneous 20	Comp./Res.	Immature
175	Although it is forbidden, would you carry on whistling?	Criticising	Marshmallow	Structuring	Nurturing	Accounting	Cooperative	Spontaneous	Comp./Res. 17	Immature 3
176	Would you tell your group exactly how you want the work set out?	Criticising	Marshmallow	Structuring 19	Nurturing	Accounting	Cooperative	Spontaneous	Comp./Res. 1	Immature
177	Would you ensure the measurements for the wallpaper are accurate?	Criticising	Marshmallow	Structuring 2	Nurturing	Accounting 18	Cooperative	Spontaneous	Comp./Res.	Immature
178	Would you want to find out about ways of life in different parts of the world?	Criticising	Marshmallow	Structuring 1	Nurturing	Accounting 8	Cooperative 1	Spontaneous 10	Comp./Res.	Immature

179	Would you pick up your partner's feelings, before anything is said?	Criticising	Marshmallow	Structuring	Nurturing	Accounting	Cooperative	Spontaneous	Comp./Res.	Immature
					11	1	2	5	1	
180	Would you gather as many facts as possible before deciding which car to buy?	Criticising	Marshmallow	Structuring	Nurturing	Accounting	Cooperative	Spontaneous	Comp./Res.	Immature
						20				
181	Would you be reluctant to challenge authority?	Criticising	Marshmallow	Structuring	Nurturing	Accounting	Cooperative	Spontaneous	Comp./Res.	Immature
			1						19	
182	Would you invite friends and neighbours round for a chat?	Criticising	Marshmallow	Structuring	Nurturing	Accounting	Cooperative	Spontaneous	Comp./Res.	Immature
							18	2		
183	Would you keep all sorts of important documents in one old envelope?	Criticising	Marshmallow	Structuring	Nurturing	Accounting	Cooperative	Spontaneous	Comp./Res.	Immature
			1			2		1	2	14
184	Would you tune in to how your nervous companions were feeling on the scary walk?	Criticising	Marshmallow	Structuring	Nurturing	Accounting	Cooperative	Spontaneous	Comp./Res.	Immature
				1	14	1	3	1		
185	Would you recognise how it is that some people find things difficult?	Criticising	Marshmallow	Structuring	Nurturing	Accounting	Cooperative	Spontaneous	Comp./Res.	Immature
					15	4	1			
186	Would you refuse to come downstairs when told the meal is ready?	Criticising	Marshmallow	Structuring	Nurturing	Accounting	Cooperative	Spontaneous	Comp./Res.	Immature
									17	3
187	Would you measure the suitcases to ensure they will pack into the car?	Criticising	Marshmallow	Structuring	Nurturing	Accounting	Cooperative	Spontaneous	Comp./Res.	Immature
						16			4	
188	Would you let the little children have their tea on their own so they can chat and giggle together freely?	Criticising	Marshmallow	Structuring	Nurturing	Accounting	Cooperative	Spontaneous	Comp./Res.	Immature
					17		2	1		
189	Might you spend your own holiday money on driving lessons for your teenager?	Criticising	Marshmallow	Structuring	Nurturing	Accounting	Cooperative	Spontaneous	Comp./Res.	Immature
			18						2	
190	Would you make a range of attractive presents out of left over scraps of fabric and wool etc?	Criticising	Marshmallow	Structuring	Nurturing	Accounting	Cooperative	Spontaneous	Comp./Res.	Immature
			1					18	1	
191	Would you visualise a dramatic ending to the story?	Criticising	Marshmallow	Structuring	Nurturing	Accounting	Cooperative	Spontaneous	Comp./Res.	Immature
								20		
192	Would you walk into the room at a party and join a group you don't know?	Criticising	Marshmallow	Structuring	Nurturing	Accounting	Cooperative	Spontaneous	Comp./Res.	Immature
							16	4		
193	Would you be likely to keep clearing up the rest of the family's mess?	Criticising	Marshmallow	Structuring	Nurturing	Accounting	Cooperative	Spontaneous	Comp./Res.	Immature
			17						3	



194	Would you maintain that it was being pushed made you spill your drink?	Criticising 9	Marshmallow	Structuring 1	Nurturing	Accounting	Cooperative	Spontaneous	Comp./Res. 4	Immature 6
195	Would you stand by your commitment to the safety rules?	Criticising	Marshmallow	Structuring 16	Nurturing	Accounting 4	Cooperative	Spontaneous	Comp./Res.	Immature
196	Would you consider in what way the outcomes of the project match up with the original goals?	Criticising	Marshmallow	Structuring	Nurturing	Accounting 20	Cooperative	Spontaneous	Comp./Res.	Immature
197	Would you leave the footpath to explore the cave in the side of the hill?	Criticising	Marshmallow	Structuring	Nurturing	Accounting	Cooperative	Spontaneous 20	Comp./Res.	Immature
198	Might you keep goodies hidden till other people have gone?	Criticising	Marshmallow	Structuring	Nurturing	Accounting	Cooperative	Spontaneous 1	Comp./Res. 4	Immature 15
199	Would you have a temper tantrum if you were frustrated beyond endurance?	Criticising	Marshmallow	Structuring	Nurturing	Accounting	Cooperative	Spontaneous 5	Comp./Res. 1	Immature 14
200	Would you encourage someone to write the book they have been dreaming of writing for years?	Criticising	Marshmallow	Structuring 5	Nurturing 15	Accounting	Cooperative	Spontaneous	Comp./Res.	Immature
201	Would you organise a street party to celebrate a big occasion?	Criticising	Marshmallow	Structuring 5	Nurturing	Accounting	Cooperative 4	Spontaneous 11	Comp./Res.	Immature
202	When your friend is late arriving, would you dream up a long scenario to explain the situation?	Criticising	Marshmallow 3	Structuring	Nurturing	Accounting	Cooperative 2	Spontaneous 5	Comp./Res. 10	Immature
203	Would you protest that you could not finish the job because of lack of support from others?	Criticising 11	Marshmallow	Structuring	Nurturing	Accounting 1	Cooperative	Spontaneous	Comp./Res. 5	Immature 3
204	Would you provide a deliciously tempting luncheon tray for your sick friend?	Criticising	Marshmallow	Structuring	Nurturing 18	Accounting	Cooperative 2	Spontaneous	Comp./Res.	Immature
205	Would you offer to do the shopping for a disabled neighbour?	Criticising	Marshmallow	Structuring	Nurturing 15	Accounting	Cooperative 5	Spontaneous	Comp./Res.	Immature
206	Would you bite your nails waiting for the exam results?	Criticising	Marshmallow	Structuring	Nurturing	Accounting	Cooperative	Spontaneous 1	Comp./Res. 17	Immature 2
207	Would you change the TV channel without asking the others?	Criticising 1	Marshmallow	Structuring	Nurturing	Accounting	Cooperative	Spontaneous	Comp./Res. 1	Immature 18
208	Would you wave and call greetings to the people on the passing steamer?	Criticising	Marshmallow	Structuring	Nurturing	Accounting	Cooperative 2	Spontaneous 18	Comp./Res.	Immature

209	Would you state your point of view clearly in the discussion?	Criticising	Marshmallow	Structuring 3	Nurturing	Accounting 15	Cooperative 2	Spontaneous	Comp./Res.	Immature
210	Might you drive off without offering anyone a lift to the station?	Criticising 1	Marshmallow	Structuring	Nurturing	Accounting 1	Cooperative	Spontaneous	Comp./Res. 2	Immature 16
211	Would you realise that some of the people present seem unhappy with the proposed arrangement?	Criticising	Marshmallow	Structuring	Nurturing 9	Accounting 9	Cooperative 2	Spontaneous	Comp./Res.	Immature
212	When your friend appears in the doorway, would your face light up with pleasure ?	Criticising	Marshmallow	Structuring	Nurturing	Accounting	Cooperative 3	Spontaneous 17	Comp./Res.	Immature
213	Despite the hosepipe ban, would you still water the garden?	Criticising	Marshmallow	Structuring	Nurturing	Accounting	Cooperative	Spontaneous	Comp./Res. 8	Immature 12
214	Would you tend to keep bringing the conversation back to yourself?	Criticising	Marshmallow	Structuring	Nurturing	Accounting	Cooperative	Spontaneous	Comp./Res. 2	Immature 18
215	Would you walk on the newly frozen river?	Criticising	Marshmallow	Structuring	Nurturing	Accounting	Cooperative	Spontaneous 1	Comp./Res. 1	Immature 18
216	Might you say no one minute and yes the next to the same question?	Criticising	Marshmallow 12	Structuring	Nurturing	Accounting	Cooperative	Spontaneous	Comp./Res. 4	Immature 4

**Functional**

**Fluency**

**Index**

Distributed for research use only, reproduction prohibited  
© Copyright 1999 by Susannah Temple

# Functional Fluency Index

Office use only  
Site                      Number

## Personal Details

Please tick appropriate boxes

Gender	Male	Female

Age	Under 20	20-29	30-39	40-49	50-59	Over 60

## Ethnic Origin

(Equal Opportunity European Standard)

Bangladeshi	Black African	Black Caribbean	Black Other specify	Chinese	Indian
Pakistani	Asian Other specify	White	Other specify	Prefer not to say.	

## Knowledge of Transactional Analysis:

A lot Done TA training	Some e.g. done TA '101'	A little e.g. read a book	None

## Occupational Details

Please fill in appropriate boxes

1. If you are an employee:

Job Title	
Employer or Organisation	

2. If you are a student:

Name of Course	
Institution	

3. Other:

Please specify

As this is a pilot, we may need to contact some people at a later date to gather their views about doing this exercise. If you are willing to be contacted, please tick the box and add your phone number(s).

I am willing to be contacted	Day-time phone number	Evening phone number

# Functional Fluency Index

## Introduction

### About the Functional Fluency Index

This questionnaire explores your patterns of communication, and the way that you get along with people.

The aim is to produce accurate information that, with help from the feedback session, will enable you to increase your self awareness and interpersonal skills.

The Functional Fluency Index is NOT for measuring your abilities, nor is it for finding out what "type " of a person you are. Instead, it helps you take a profile of your tendencies and habits, both negative and positive, in a variety of situations and relationships.

The questions are about a range of actions. You will be asked to say how likely you think it is that you would do them. It is understood that everyone has good and bad times, and that circumstances vary, so take this into account and answer as exactly and truly as possible.

There are no "right" or "wrong" answers. Your scores will produce a Functional Fluency Profile unique to you. The more you are accurate and honest, the more useful you will find your results.

Your Profile will be presented to you later at the feedback session with information, explanations and the opportunity for discussion, so that you can start to make full use of the results to develop your self awareness and interpersonal skills.

### What to Do

Complete the questionnaire in peace and quiet, without interruption. Answer all the questions. Even if you find any hard to answer, have a go at each one somehow. There is no time limit.

Don't spend much time deliberating; just give the answers that come naturally to you. A good pace is about 10 - 20 seconds per question, then you'll be finished inside 40 minutes. There are 108 questions.

**Each question asks if you would take a particular action.**

**What you have to do is decide how likely or unlikely it is, on average, that you would take it.**

**Make a big tick on one of the six boxes for each question (see example).**

extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely
------------------	--------	-----------------	-------------------	----------	--------------------

As you see, there isn't a "don't know" box! You have to choose one of these six.

Trying to work out what you "ought" to put won't help. Your own unique response will give you the best results.

If you make a mistake, cross it out and put your new answer.

*(N.B. Various wording strategies have been used in the questionnaire to avoid possible gender bias and also the clumsiness of he/she and his/hers.)*

On the next page is a set of examples

# Functional Fluency Index

## Examples

Have a go with these examples first, so that you can ask questions if you need to.

Some people like to think their answer through like this:-

- They decide first whether the action is on the likely or the unlikely side for them.
- Then they decide how likely or unlikely it would be: extremely? middling? slightly?
- Finally they choose the appropriate box and tick it.

### Example 1 (done for you)

In a deserted children's playground, would you have a go on the swings or something?

extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely
------------------	--------	-----------------	-------------------	----------	--------------------

- Think it through:-
- More likely than unlikely for me.
  - I think I might hesitate a bit, but I probably would, so it's middling likely.
  - That means I tick the box "likely".

Now complete the next two examples yourself, thinking through the steps a,b,c as above, if they help.

### Example 2

Would you normally read these instructions very carefully?

extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely
------------------	--------	-----------------	-------------------	----------	--------------------

### Example 3

Would you ask for more information if you needed it?

extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely
------------------	--------	-----------------	-------------------	----------	--------------------

Ask now if you are unsure about anything.  
When you are clear about how to do it, you can start the questionnaire.

# Functional Fluency Index

## Questionnaire A

1		After a disagreement, might you stomp out of the room and slam the door?			
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely

2		Would you impose your own ideas on a group without consulting them?			
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely

3		Would you see fantastic pictures when gazing at the clouds?			
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely

4		When facing a sticky problem, would you tackle it with some lateral thinking?			
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely

5		Would you insist on how the room is to be arranged?			
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely

6		Would you stay silent in the group, in case you might say the wrong thing?			
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely

7		Would you negotiate openly and directly for a fair solution?			
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely

8		Would you talk passionately about your hobby to young people, so that they would want to have a go at it?			
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely

9		Might you think it a good idea for someone to suffer for what they've done wrong, to teach them a lesson?			
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely

10		Might you drive off after the event without offering anyone a lift to the station?			
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely

# Functional Fluency Index

## Questionnaire A

11		Would you find a way not to comply with the dress requirements for the occasion?					
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely		

12		Would you find it easy to get up and speak to a large gathering of people ?					
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely		

13		Would you stay with the miserable and howling children until they are comforted?					
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely		

14		Would you peep behind the door to see what is there?					
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely		

15		Would you realise that your feet are becoming cold as the temperature drops?					
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely		

16		Would you choose to be with other people most of the time?					
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely		

17		Would you run right along the beach splashing in the waves?					
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely		

18		Would you mark the children's pictures out of ten to see who has done best?					
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely		

19		Would you improvise some new verses to an old song?					
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely		

20		At the sad farewell, would you let yourself cry?					
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely		



# Functional Fluency Index

## Questionnaire A

21					
Would you be inclined to find something wrong with the way a job is done?					
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely

22					
Would you switch off the television when the visitors arrive?					
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely

23					
Would you usually greet others warmly?					
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely

24					
Would you protest that you could not finish the job because of lack of support from others?					
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely

25					
Would you recognise what makes things difficult for people sometimes?					
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely

26					
Would you generally have a reason for your actions?					
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely

27					
Would you hesitate to join the queue for second helpings, even though you'd like to?					
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely

28					
Would you re-energise the long meeting with a bit of fun?					
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely

29					
Would you tell the crowds to stand back so the doctor could reach the scene of the accident?					
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely

30					
Would you make sure to provide life jackets for canoeing down the river?					
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely

# Functional Fluency Index

## Questionnaire A

31					
Would you walk into the room at a party and join a group you don't know?					
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely

32					
Would you detect that the wind had changed direction?					
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely

33					
Although it is forbidden, would you carry on whistling?					
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely

34					
Would you offer to look after your neighbours' house while they are away?					
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely

35					
Would you change plans and agree to work late tonight and have tomorrow morning off?					
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely

36					
If you witnessed a mugging, would you take charge and order the attacker to stop?					
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely

37					
Would you usually allow the children to stay up as long as they liked?					
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely

38					
Would you allow someone to get away with not repaying you a loan?					
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely

39					
Would you make notes about the houses for sale and compare them to help you choose?					
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely

40					
Would you go through the traffic lights as they turn red?					
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely

# Functional Fluency Index

## Questionnaire A

41		Would you tend to keep bringing the conversation back to yourself?					
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely		

42		Would you gather as many facts as possible before deciding which car to buy?					
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely		

43		When your friends are asked a question, might you answer for them?					
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely		

44		Would you take some unfair criticism, assuming the person must be right?					
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely		

45		Would you allow the person as much time off work as needed after their mother's death?					
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely		

46		Would you refuse to let the children enter the swimming gala in case they drown?					
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely		

47		Would you refuse all applications after the deadline, as you said you would?					
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely		

48		Would you stand by your commitment to the safety rules?					
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely		

49		Would you be inclined to break rules as a matter of course?					
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely		

50		Would you invite friends and neighbours round for a cup of tea and a chat?					
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely		

# Functional Fluency Index

## Questionnaire A

51					
Would you be inclined to keep on clearing up the rest of the family's mess?					
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely

52					
Would you leave the footpath to explore the cave in the side of the hill?					
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely

53					
Would you change the TV channel without asking the others?					
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely

54					
Would you guess rightly that the brash new employee is actually very nervous?					
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely

55					
Although upset by the accident, would you remember to take witness names and addresses?					
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely

56					
Would you make excuses for your action to someone who appears critical?					
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely

57					
Would you notice a change in the sound of the car engine?					
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely

58					
Might you give up your holiday to pay for driving lessons for your teenager?					
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely

59					
Would you have your medicine cupboard fitted with child-proof locks?					
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely

60					
Would you happily eat a different sort of breakfast when staying with friends?					
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely

# Functional Fluency Index

## Questionnaire A

61		Would you put your children to bed if they had a bout of sneezing to be on the safe side?				
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely	

62		If you were performing, would you register the shifting moods of the audience?				
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely	

63		Would you give yourself a hard time for failing to solve a problem?				
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely	

64		Would you sense what your partner's feelings were, before anything was said?				
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely	

65		Would you refuse to let the children have the forbidden biscuits, although they keep whining for them?				
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely	

66		Would you seek an explanation to make sense of the conflicting messages?				
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely	

67		Even though very excited about your surprise holiday, would you still do the essential packing effectively?				
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely	

68		Would you always make sure to collect the children from school at the right time?				
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely	

69		Would you remember friends' birthdays and anniversaries with a card or celebration.?				
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely	

70		Might you say no one minute and then yes the next to the children's repeated request?				
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely	

# Functional Fluency Index

## Questionnaire A

71		Would you get very tensed up waiting for the exam results?					
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely		

72		Would you visualise a dramatic ending to the story?					
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely		

73		Would you give clear instructions about what to do?					
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely		

74		Would you move up a seat so that two friends can sit together?					
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely		

75		Would you be the one to take the decision to evacuate the building in an emergency?					
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely		

76		Would you improvise a raincoat by making head and armholes in a large plastic sack?					
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely		

77		Would you continue to talk to the cashier even though the queue is getting longer and longer?					
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely		

78		Would you comment on the one cupboard that has not yet been fully cleared?					
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely		

79		Might you keep goodies hidden till other people have gone?					
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely		

80		Might you say sorry when the bully barges past?					
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely		

# Functional Fluency Index

## Questionnaire A

81		Would you give someone the boost they need to get started on their long-desired project?				
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely	

82		Would you go along with your companion's decision on where to go for the holiday?				
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely	

83		Would you offer to look after the children, as a way of enabling someone to attend their training course?				
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely	

84		Would you be inclined to say, "I know I said you mustn't, but just this once....."?				
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely	

85		If the boss says everyone must stay on till 5.30, would you still leave at 5.10?				
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely	

86		Would you push through an agreement to do things the way you think best?				
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely	

87		Would you comment appreciatively on the good things the others are doing?				
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely	

88		Would you allow your new colleague more time to complete the project, as part of settling in?				
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely	

89		Would you weigh the suitcases to ensure they will meet airline baggage limits?				
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely	

90		Would you make decisions for other people to save them the trouble?				
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely	

# Functional Fluency Index

## Questionnaire A

91					
Would you want someone to give you a comforting warm drink to help you recover from a traumatic event?					
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely

92					
Even though you're tired out, and it's time to leave work, might you listen on and on to a chatty colleague?					
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely

93					
Would you be inclined to go without your treat because you felt you hadn't done well enough?					
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely

94					
Would you stay alongside the child learning to ride a bike, helping their confidence to grow?					
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely

95					
Would you try to provide limitless treats for your family?					
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely

96					
Would you write detailed explanations showing exactly what to do?					
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely

97					
Would you go rock climbing without the necessary equipment?					
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely

98					
Would you wave back to the people on the passing steamer?					
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely

99					
Would you drive through the puddles without realising that you are splashing the pedestrians?					
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely

100					
Might you be tempted to call someone who repeatedly forgot things "hopeless"?					
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely



# Functional Fluency Index

## Questionnaire A

101		Would you take steps to find out why you were not appointed for the job?			
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely

102		Would you tell the children to build the sand castle a particular way?			
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely

103		Would you rig up a raft out of scraps to escape from shipwreck?			
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely

104		Would you warm the beds ready for visitors arriving late on a cold night?			
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely

105		When your friend appears in the doorway, would your face light up with pleasure ?			
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely

106		Might you still be in the bath when the guests arrive on time for dinner?			
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely

107		Might you organise an outing without confirming the necessary transport?			
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely

108		Would you be afraid to sleep with the window open for fear of intruders?			
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely

**Functional**

**Fluency**

**Index**

Distributed for research use only, reproduction prohibited  
© Copyright 1999 by Susannah Temple

# Functional Fluency Index

Office use only  
Site                      Number

## Personal Details

Please tick appropriate boxes

Gender	Male	Female

Age	Under 20	20-29	30-39	40-49	50-59	Over 60

## Ethnic Origin

(Equal Opportunity European Standard)

Bangladeshi	Black African	Black Caribbean	Black Other specify	Chinese	Indian
Pakistani	Asian Other specify	White	Other specify	Prefer not to say.	

## Knowledge of Transactional Analysis:

A lot Done TA training	Some e.g. done TA '101'	A little e.g. read a book	None

## Occupational Details

Please fill in appropriate boxes

1. If you are an employee:

Job Title	
Employer or Organisation	

2. If you are a student:

Name of Course	
Institution	

3. Other:

Please specify

As this is a pilot, we may need to contact some people at a later date to gather their views about doing this exercise. If you are willing to be contacted, please tick the box and add your phone number(s).

I am willing to be contacted	Day-time phone number	Evening phone number

# Functional Fluency Index

## Introduction

### About the Functional Fluency Index

This questionnaire explores your patterns of communication, and the way that you get along with people.

The aim is to produce accurate information that, with help from the feedback session, will enable you to increase your self awareness and interpersonal skills.

The Functional Fluency Index is NOT for measuring your abilities, nor is it for finding out what "type " of a person you are. Instead, it helps you take a profile of your tendencies and habits, both negative and positive, in a variety of situations and relationships.

The questions are about a range of actions. You will be asked to say how likely you think it is that you would do them. It is understood that everyone has good and bad times, and that circumstances vary, so take this into account and answer as exactly and truly as possible.

There are no "right" or "wrong" answers. Your scores will produce a Functional Fluency Profile unique to you. The more you are accurate and honest, the more useful you will find your results.

Your Profile will be presented to you later at the feedback session with information, explanations and the opportunity for discussion, so that you can start to make full use of the results to develop your self awareness and interpersonal skills.

### What to Do

Complete the questionnaire in peace and quiet, without interruption. Answer all the questions. Even if you find any hard to answer, have a go at each one somehow. There is no time limit.

Don't spend much time deliberating; just give the answers that come naturally to you. A good pace is about 10 - 20 seconds per question, then you'll be finished inside 40 minutes. There are 108 questions.

**Each question asks if you would take a particular action.**

**What you have to do is decide how likely or unlikely it is, on average, that you would take it.**

**Make a big tick on one of the six boxes for each question (see example).**

extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely
------------------	--------	-----------------	-------------------	----------	--------------------

As you see, there isn't a "don't know" box! You have to choose one of these six.

Trying to work out what you "ought" to put won't help. Your own unique response will give you the best results.

If you make a mistake, cross it out and put your new answer.

*(N.B. Various wording strategies have been used in the questionnaire to avoid possible gender bias and also the clumsiness of he/she and his/hers.)*

**On the next page is a set of examples**

# Functional Fluency Index

## Examples

Have a go with these examples first, so that you can ask questions if you need to.

Some people like to think their answer through like this:-

- They decide first whether the action is on the likely or the unlikely side for them.
- Then they decide how likely or unlikely it would be: extremely? middling? slightly?
- Finally they choose the appropriate box and tick it.

### Example 1 (done for you)

In a deserted children's playground, would you have a go on the swings or something?

extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely
------------------	--------	-----------------	-------------------	----------	--------------------

- Think it through:-
- More likely than unlikely for me.
  - I think I might hesitate a bit, but I probably would, so it's middling likely.
  - That means I tick the box "likely".

Now complete the next two examples yourself, thinking through the steps a,b,c as above, if they help.

### Example 2

Would you normally read these instructions very carefully?

extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely
------------------	--------	-----------------	-------------------	----------	--------------------

### Example 3

Would you ask for more information if you needed it?

extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely
------------------	--------	-----------------	-------------------	----------	--------------------

Ask now if you are unsure about anything.  
When you are clear about how to do it, you can start the questionnaire.

# Functional Fluency Index

## Questionnaire B

1					
Might you have a temper tantrum if you were frustrated beyond endurance?					
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely

2					
Would you tend to keep steering the conversation onto your preferred topics?					
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely

3					
Hearing an interesting sound, would you conjure up lots of ideas for what it could be?					
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely

4					
Would you make a range of attractive presents out of oddments of materials?					
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely

5					
Would you take it on yourself to issue instructions in a group of which you are just an ordinary member?					
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely

6					
Although you cannot see the board well enough, would you be reluctant to ask for help?					
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely

7					
Would you put your point of view across clearly in the argument?					
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely

8					
Would you convince people that they can do really well and succeed?					
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely

9					
Might you send the children to bed supperless if they had been naughty, to teach them a lesson?					
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely

10					
Would you find it hard to make the effort to take your sick friend to hospital, even though you are free?					
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely

# Functional Fluency Index

## Questionnaire B

11		Would you plan how to avoid going to the required meeting?					
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely		

12		Would you have a go at things, believing that you'll soon learn how to do them?					
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely		

13		Would you delay until he is stronger, telling an accident victim of the death of his companion?					
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely		

14		Would you be keen to find out lots more about a situation that intrigued you?					
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely		

15		Would you realise that some of the people present seem unhappy with the proposed arrangement?					
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely		

16		Would you enjoy meeting lots of new people?					
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely		

17		When people are flagging, would you create a zoom of energy to liven them up?					
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely		

18		Would you call an adult person silly to be afraid of lighting the matches?					
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely		

19		Would you gather the flowers and leaves you were given into a beautiful arrangement?					
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely		

20		Would you scream with fright on a ghost train?					
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely		

# Functional Fluency Index

## Questionnaire B

21					
Would you comment on the little smears left on the washed up dishes?					
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely

22					
Would you hold open the door to make it easier for the people to come through?					
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely

23					
Would you open the door with a smile?					
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely

24					
Would you maintain that you wouldn't have broken the cup if someone else hadn't left it in a silly place?					
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely

25					
Would you let the children have their tea on their own so they can chat and giggle together freely?					
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely

26					
Would you work out a system to maximise your chance to win?					
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely

27					
Would you sit through the meeting without contributing, although you are invited to do so?					
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely

28					
Might you sing with delight at the start of a new day?					
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely

29					
Would you allocate jobs to the helpers at the fete?					
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely

30					
Would you make sure your partner wasn't disturbed while revising for the next day's exam?					
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely



# Functional Fluency Index

## Questionnaire B

31		Would you feel OK about taking on the increased challenges of a new job?					
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely		

32		Would you spot a safe gap in the traffic, so you could cross the road?					
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely		

33		During a drought, despite the hosepipe ban, would you still water the garden?					
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely		

34		Would you hold the boat steady so the children can climb out by themselves?					
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely		

35		Would you match your walking pace to that of your companion?					
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely		

36		Would you take on the role of starter for the races?					
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely		

37		Would you tend to excuse bad behaviour because the youngster had a difficult home life?					
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely		

38		Would you give in to your partner's tantrum, for the sake of peace?					
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely		

39		Would you compare the results with those of previous years in order to come to a conclusion?					
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely		

40		Would you go out in the car in bad weather conditions even though police warnings have been given?					
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely		

# Functional Fluency Index

## Questionnaire B

41		Although it is your friend who is ill, might you spend the time talking about your own ailments?			
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely

42		Would you consider in what way the outcomes of the project match up with the original goals?			
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely

43		Would you insist on doing your grownup children's washing when they come home for the weekend			
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely

44		Would you be reluctant to challenge authority?			
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely

45		Would you take time to steer the nervous old person gently through the traffic?			
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely

46		Would you insist on walking your 12 year old to school every day?			
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely

47		Having decided not to buy certain goods on principle, would you then make sure to avoid buying them?			
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely

48		Would you make sure the contract is clear and is carried through?			
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely

49		Would you keep on going against the decision of your group leader?			
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely

50		Would you get together with other people as a way to have a good time?			
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely

# Functional Fluency Index

## Questionnaire B

51		Would you keep up your smiling acceptance, even though your guests are disturbing the neighbours?			
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely
52		Would you be fascinated to experience the ways of life in different parts of the world?			
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely
53		Might you leave your car parked blocking someone in?			
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely
54		Would you sense that letting the child bring their pet on the visit would help prevent homesickness?			
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely
55		Would you keep your wits about you at a time of conflict?			
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely
56		Would you tend to apologise before making a critical comment about something?			
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely
57		Would you pay full attention while the rules are explained?			
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely
58		Would you make sure everyone else has a good helping by not having any yourself?			
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely
59		Would you take the children to the safe road crossing place?			
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely
60		When the rain starts, would you set up to eat the picnic under cover instead?			
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely

# Functional Fluency Index

## Questionnaire B

61		Would you prevent your children going to camp because you think it might be too much for them?					
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely		

62		Would you notice what's in fashion?					
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely		

63		Would you be likely to insist that the mess you're in is someone else's fault?					
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely		

64		Would you tune in to how your nervous companions were feeling on the scary walk?					
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely		

65		Would you insist that the promise to the children is kept?					
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely		

66		Would you check out the facts about the rumour before taking any action?					
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely		

67		Would you keep calm and in touch with reality even though you found the film terrifying?					
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely		

68		Having agreed a set of rules, would you then apply them?					
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely		

69		Would you provide a deliciously tempting lunch for your child who's poorly?					
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely		

70		Would you occasionally insist on the safety rules, but otherwise let them do as they please?					
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely		

# Functional Fluency Index

## Questionnaire B

71		Would you keep consulting the vet about your pet's loss of appetite, despite having been told all is well?					
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely		

72		If you didn't know the facts, would you be good at inventing a story to explain the situation?					
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely		

73		Would you tell the visitors the best place to park?					
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely		

74		Would you let the hurried person in the supermarket queue behind you go first with their single item?					
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely		

75		Would you tell the youngsters to stop chasing about at the road side because it's dangerous?					
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely		

76		Would you devise a way to make it possible to move the heavy load?					
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely		

77		Might you stand up while watching the show, blocking the view for those behind?					
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely		

78		Would you be inclined to point out the mistakes in the piece of work?					
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely		

79		Would you be reluctant to share your brand new felt-tip pens with anyone?					
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely		

80		To avoid the other person getting angry, would you agree to change the plans?					
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely		

# Functional Fluency Index

## Questionnaire B

81		Would you help someone dare to go paddling, as a first step in overcoming their fear of the water?				extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely
82		Might you agree to work late, unpaid, for a bullying boss?				extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely
83		Would you give information from your experience in a way that people find useful?				extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely
84		Would you sometimes put yourself on a strict diet, but then ignore it by eating sweet things?				extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely
85		Would you refuse to do the washing up when it's your turn on the rota?				extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely
86		Would you insist on having to approve initiatives made by other people?				extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely
87		Would you show appreciation of the beginner's achievements, however small?				extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely
88		Would you appreciate other people's differing views on the matter?				extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely
89		Would you ensure the measurements for the wallpaper are accurate?				extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely
90		Would you assume you'll do your partner's Xmas shopping as well as your own?				extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely

# Functional Fluency Index

## Questionnaire B

91		Would you be inclined to sulk when you don't get your choice of TV programme?				
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely	
92		Would you find it hard to believe that your point of view matters even when you're in charge?				
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely	
93		Would you think it a good idea to deny all the children playtime when some of them misbehave?				
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely	
94		Would you turn up to watch an event in order to support friends taking part in it?				
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely	
95		Would you buy your child whatever he or she asked for?				
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely	
96		Would you check the accuracy of the scales before weighing out the ingredients?				
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely	
97		Would you go swimming alone in the rough sea?				
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely	
98		Would you welcome the new neighbours with a card or a visit?				
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely	
99		Would you be inclined to see things only from your own viewpoint?				
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely	
100		Would you define an inadequate report as "no good"?				
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely	

# Functional Fluency Index

## Questionnaire B

101		Would you show the manager what's wrong with the faulty goods and ask for your money back?					
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely		

102		Would you be tempted to keep telling the expert removers what to do next to load the furniture?					
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely		

103		Would you invent a way to switch off the light without getting out of bed?					
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely		

104		Would you buy the book for your friend, remembering how much this friend wanted a copy?					
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely		

105		At a time for celebration, would you dance for joy?					
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely		

106		Would you find it difficult to keep a handy pen by the phone?					
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely		

107		Might you keep all sorts of important documents in an unmarked old envelope?					
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely		

108		Although they say you look good in your party clothes, would you still tend to worry about whether you're wearing the right things?					
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely		



# Functional Fluency Index Pilot Scoring Details

Form.....

Date:

Site:

Number:

Each of your answers on the questionnaire will score between one and six, thus:-

extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely
6	5	4	3	2	1

Go through your answers putting your numerical scores in the boxes beside the question numbers, thus:

1	3	This is the box for all the various questions that you answered			
extremely likely	likely	slightly likely	slightly unlikely	unlikely	extremely unlikely

Dealing with missing scores:

Put 4 for positive modes and 3 for negative modes. Your administrator will help.

1. Copy your scores onto the Question Score Sheet, so everything is on one page.
2. Then transfer the data onto the tables over the page, where there is a box for every score.

# Functional Fluency Index Question Score Sheet

1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	
12	
13	
14	
15	
16	
17	
18	
19	
20	
21	
22	
23	
24	
25	
26	
27	
28	
29	
30	
31	
32	
33	
34	
35	
36	
37	
38	
39	
40	
41	
42	
43	
44	
45	
46	
47	
48	
49	
50	
51	
52	
53	
54	

55	
56	
57	
58	
59	
60	
61	
62	
63	
64	
65	
66	
67	
68	
69	
70	
71	
72	
73	
74	
75	
76	
77	
78	
79	
80	
81	
82	
83	
84	
85	
86	
87	
88	
89	
90	
91	
92	
93	
94	
95	
96	
97	
98	
99	
100	
101	
102	
103	
104	
105	
106	
107	
108	

# Scoring Sheet for Items in Positive Modes

MODE	STRUCTURING		TOTAL ITEM SCORE FOR DESCRIPTOR
DESCRIPTOR	ITEM SCORES		
authoritative	36	75	
	+	=	
consistent	47	68	
	+	=	
directive	29	73	
	+	=	
firm	48	65	
	+	=	
helpful	34	83	
	+	=	
inspiring	8	81	
	+	=	
<b>STRUCTURING TOTAL</b>			

MODE	NURTURING		TOTAL ITEM SCORE FOR DESCRIPTOR
DESCRIPTOR	ITEM SCORES		
cherishing	69	104	
	+	=	
compassionate	13	45	
	+	=	
empathic	54	64	
	+	=	
encouraging	87	94	
	+	=	
protective	30	59	
	+	=	
understanding	25	88	
	+	=	
<b>NURTURING TOTAL</b>			

MODE	ACCOUNTING			TOTAL ITEM SCORE FOR DESCRIPTOR
DESCRIPTOR	ITEM SCORES			
alert	32	57	double t	
	(	+	) x 2 =	
aware	15	62	double t	
	(	+	) x 2 =	
evaluative	39	42	double t	
	(	+	) x 2 =	
grounded	55	67	double t	
	(	+	) x 2 =	
precise	89	96	double t	
	(	+	) x 2 =	
rational	26	66	double t	
	(	+	) x 2 =	
<b>ACCOUNTING TOTAL</b>				

MODE	COOPERATIVE		TOTAL ITEM SCORE FOR DESCRIPTOR
DESCRIPTOR	ITEM SCORES		
adaptable	35	60	
	+	=	
assertive	7	101	
	+	=	
confident	12	31	
	+	=	
considerate	22	74	
	+	=	
friendly	23	98	
	+	=	
sociable	16	50	
	+	=	
<b>COOPERATIVE TOTAL</b>			

MODE	SPONTANEOUS		TOTAL ITEM SCORE FOR DESCRIPTOR
DESCRIPTOR	ITEM SCORES		
creative	4	19	
	+	=	
curious	14	52	
	+	=	
expressive	20	105	
	+	=	
imaginative	3	72	
	+	=	
ingenious	76	103	
	+	=	
zestful	17	28	
	+	=	
<b>SPONTANEOUS TOTAL</b>			

# Scoring Sheet for Items in Negative Modes

MODE	CRITICISING		
DESCRIPTOR	ITEM SCORES		TOTAL ITEM SCORE FOR DESCRIPTOR
blaming	24	63	
	+	=	
bossy	5	102	
	+	=	
dominating	2	86	
	+	=	
fault-finding	21	78	
	+	=	
judgmental	18	100	
	+	=	
punitive	9	93	
	+	=	
<b>CRITICISING TOTAL</b>			

MODE	MARSHMALLOWING		
DESCRIPTOR	ITEM SCORES		TOTAL ITEM SCORE FOR DESCRIPTOR
inconsistent	70	84	
	+	=	
over-indulgent	37	95	
	+	=	
over-protective	46	61	
	+	=	
over-tolerant	38	51	
	+	=	
self-denying	58	92	
	+	=	
smothering	43	90	
	+	=	
<b>MARSHMALLOW TOTAL</b>			

MODE	COMPLIANT / RESISTANT		
DESCRIPTOR	ITEM SCORES		TOTAL ITEM SCORE FOR DESCRIPTOR
anxious	71	108	
	+	=	
defiant	33	85	
	+	=	
inhibited	6	27	
	+	=	
placating	56	80	
	+	=	
rebellious	11	49	
	+	=	
submissive	44	82	
	+	=	
<b>COMP/RES. TOTAL</b>			

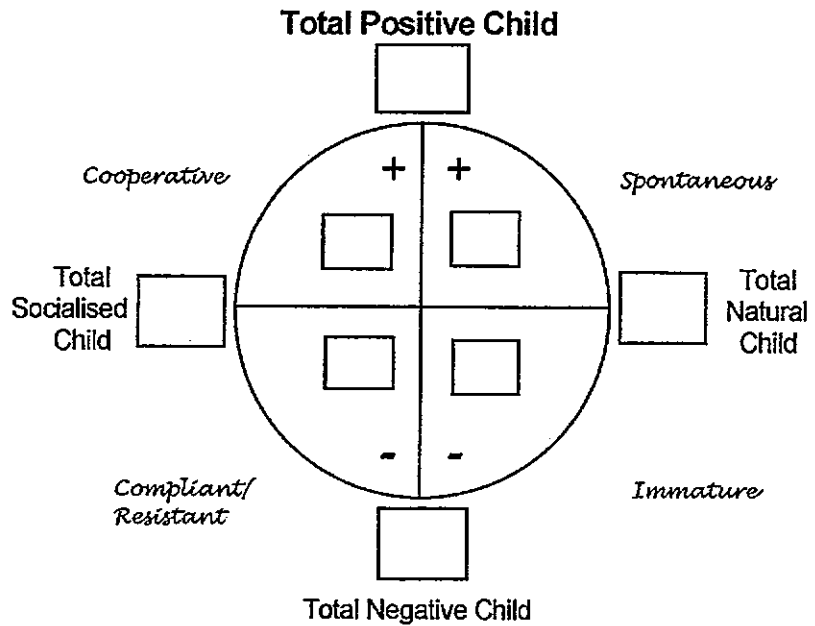
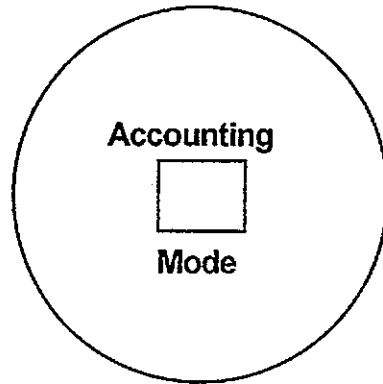
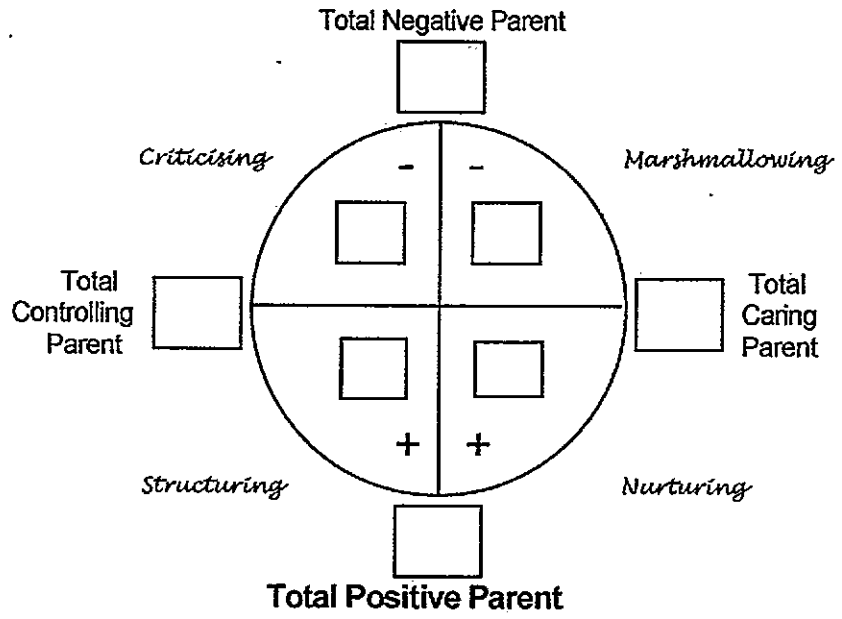
MODE	IMMATURE		
DESCRIPTOR	ITEM SCORES		TOTAL ITEM SCORE FOR DESCRIPTOR
egocentric	41	99	
	+	=	
inconsiderate	53	77	
	+	=	
infantile	1	91	
	+	=	
reckless	40	97	
	+	=	
selfish	10	79	
	+	=	
unorganised	106	107	
	+	=	
<b>IMMATURE TOTAL</b>			

Positive Mode Scores	
Structuring	
Nurturing	
Accounting	
Cooperative	
Spontaneous	
<b>Positive Total</b>	

Negative Mode Scores	
Criticising	
Marshmallowing	
Compliant/Resistant	
Immature	
<b>Negative Total</b>	

Positive Total	Divided by	Negative Total	=	Functional Fluency Index
	/		=	

# Functional Fluency Profile



# Functional Fluency Profile

Appendix C.5.

## Negative Parent Total

60

*Criticising*

*Marshmallowing*

-  
36

-  
24

**Control Total** 91

79

**Care Total**

*Ratio: 1.53*

*Ratio: 2.29*

55

55

*Structuring*

*Nurturing*

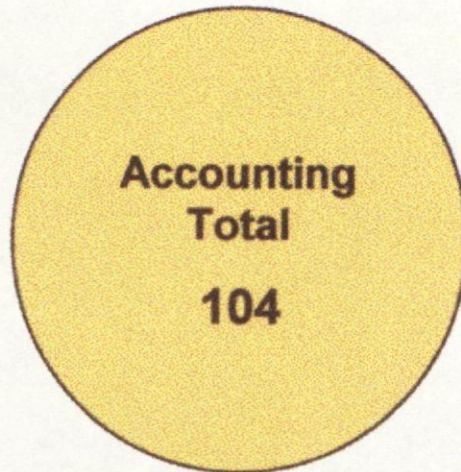
+

+

110

## Positive Parent Total

*P ratio = 1.8*



*FFI = 2.8*

## Positive Child Total

*C ratio = 2.0*

114

*Cooperative*

*Spontaneous*

+

+

55

59

**Socialised Total** 82

88

**Natural Total**

*Ratio: 2.03*

*Ratio: 2.03*

27

29

*Compliant/Resistant*

*Immature*

-

-

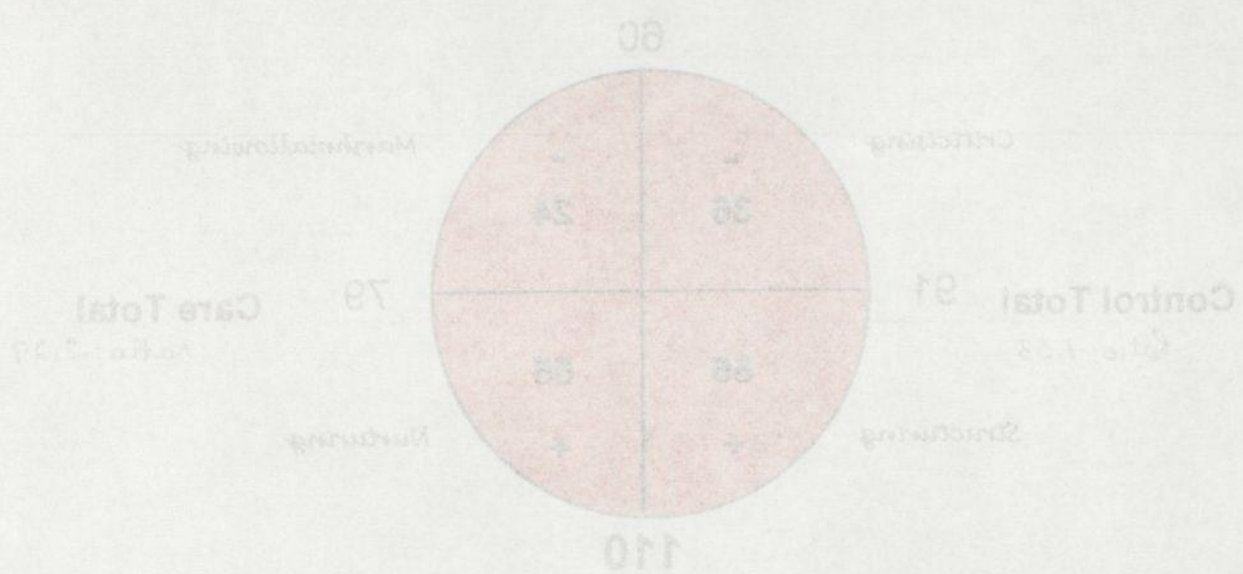
56

## Negative Child Total



# Functional Fluency Profile

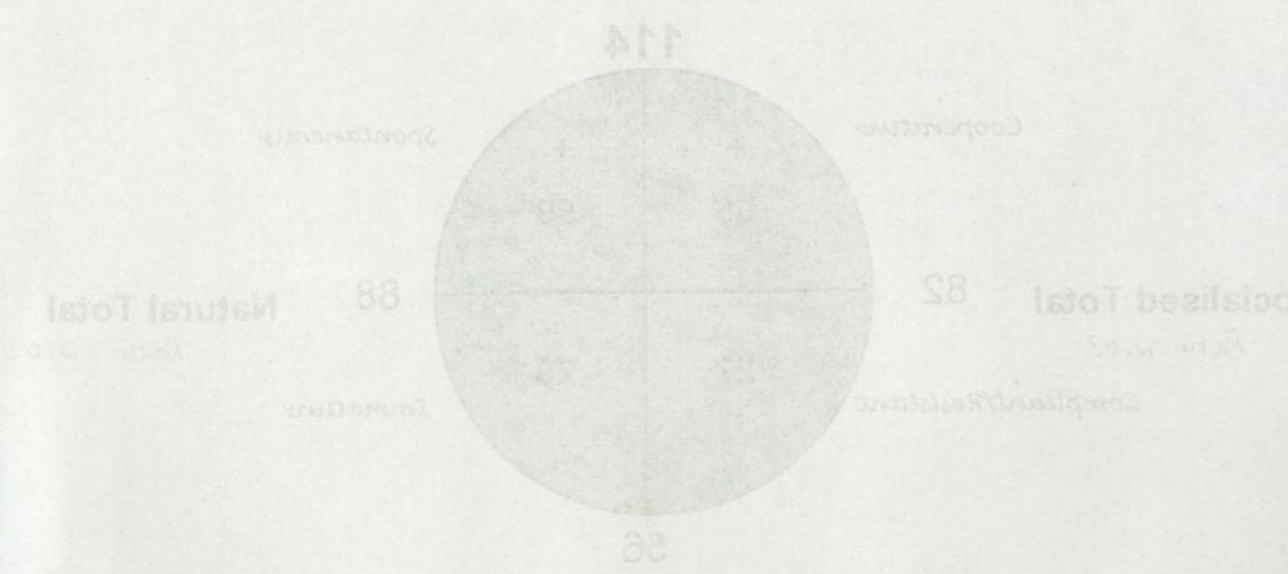
Negative Parent Total



Positive Parent Total



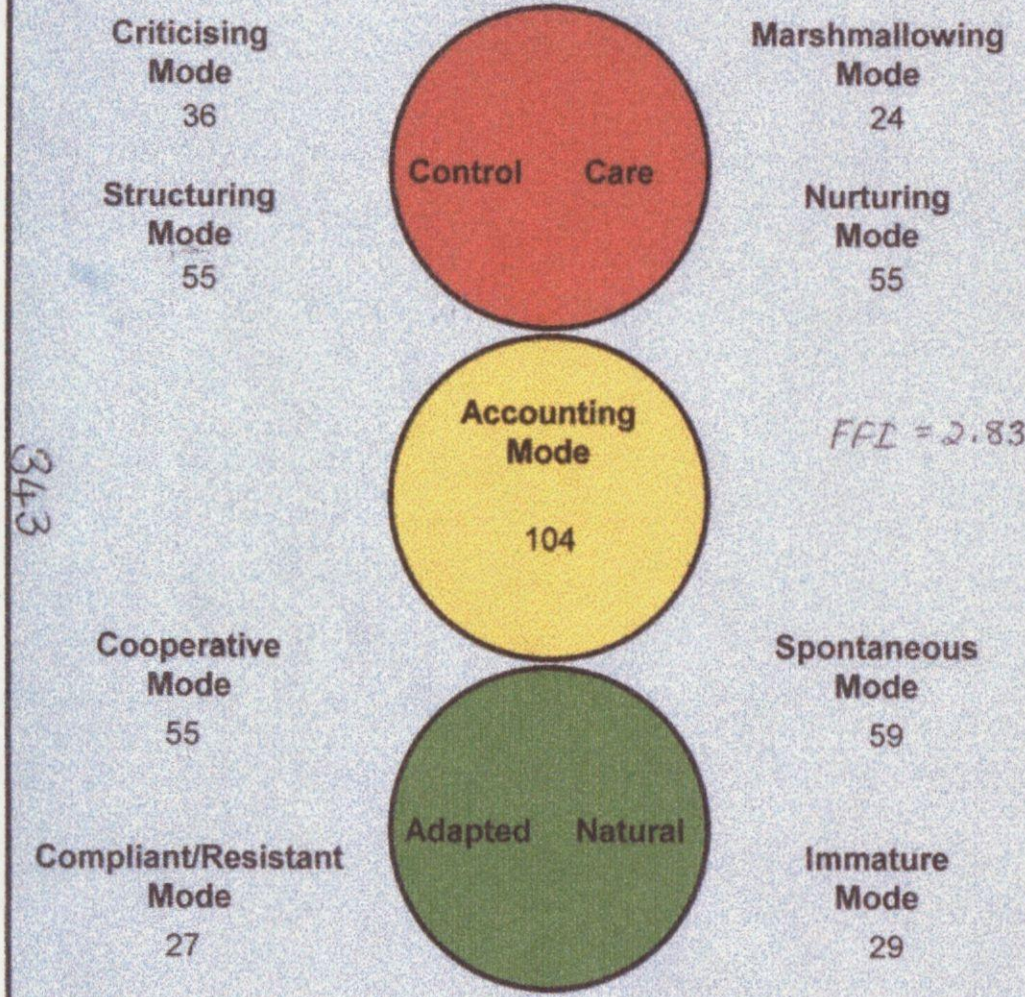
Positive Child Total



Negative Child Total



## Scores/Balances



### Child Balances

Adapted	Natural
82	88

### Parent Balances

Control	Care
91	79

#### Negative Parent

60
110
Positive Parent

#### Positive Child

114
56
Negative Child

### Balance of the Three Categories

Positive Parent	110	This is your combined balance.  How even is it?
Accounting	104	
Positive Child	114	

Functional Fluency Profile

Enter Scores

Scoring Sheet +ve

Scoring Sheet -ve

Print

Total Positive	Total Negative	Functional Fluency Index
328	116	212 / 2.83



Child Positive	114	How even is this
Accounting	101	combined
Parent Positive	110	this is

Child Positive	114	How even is this
Accounting	101	combined
Parent Positive	110	this is

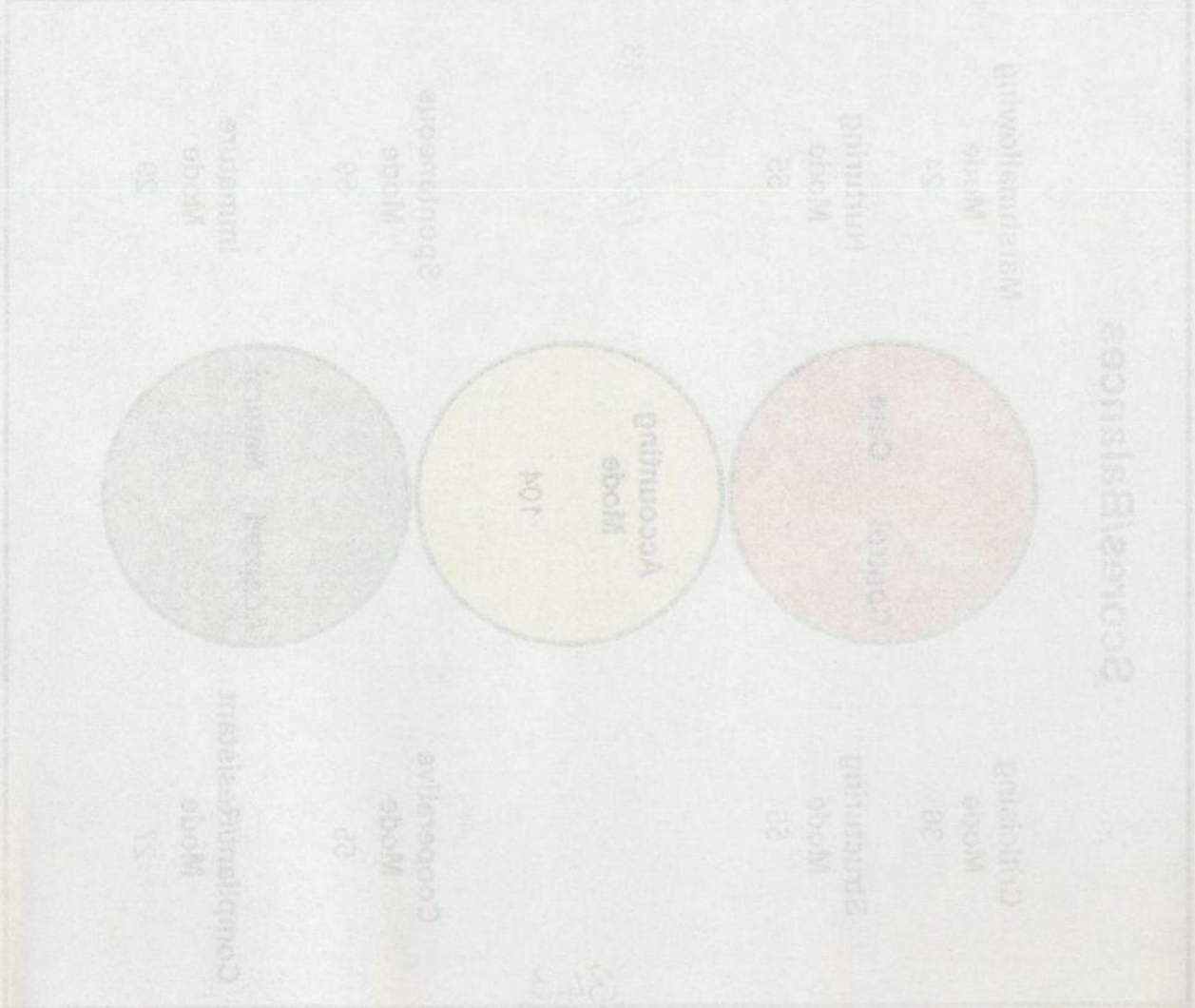
Balance of the Three Categories

Parent Positive	110	Child Negative
101	114	114
Parent Negative	110	Child Positive

Parent Positive	110	Child Negative
101	114	114
Parent Negative	110	Child Positive

58	88	87
Applied	Applied	Control
Child Positive	Child Positive	Child Positive

58	88	87
Applied	Applied	Control
Child Positive	Child Positive	Child Positive





# Scoring Sheet For Items In Negative Modes

Back

Print

## Marshmallowing Mode

inconsistent	Q 70	2	Q 84	2	4
over-indulgent	Q 37	2	Q 95	2	4
over-protective	Q 46	1	Q 61	1	2
over-tolerant	Q 38	3	Q 51	3	6
self-denying	Q 58	2	Q 92	1	3
smothering	Q 43	3	Q 90	2	5

## Criticising Mode

blaming	Q 24	3	Q 63	1	4
bossy	Q 5	4	Q 102	2	6
dominating	Q 2	5	Q 86	2	7
fault-finding	Q 21	5	Q 78	5	10
judgemental	Q 18	3	Q 100	2	5
punitive	Q 9	2	Q 93	2	4

## Immature Mode

egocentric	Q 41	2	Q 99	4	6
inconsiderate	Q 53	2	Q 77	3	5
infantile	Q 1	5	Q 91	3	8
reckless	Q 40	3	Q 97	1	4
selfish	Q 10	1	Q 79	2	3
unorganised	Q 106	2	Q 107	1	3

## Compliant/Resistant Mode

anxious	Q 71	1	Q108	2	3
defiant	Q 33	5	Q85	1	6
inhibited	Q 6	2	Q27	1	3
placating	Q 56	3	Q80	3	6
rebellious	Q 11	2	Q49	2	4
submissive	Q 44	2	Q82	3	5



Marshmallowing Mode

inconsistent	Q 70	2	Q 84	2	4
over-indulgent	Q 37	2	Q 82	2	4
over-protective	Q 46	1	Q 81	1	2
over-ferocious	Q 38	2	Q 81	2	6
self-denying	Q 58	2	Q 82	1	2
smothering	Q 42	2	Q 80	2	6

Criticizing Mode

planning	Q 24	3	Q 83	1	4
pressy	Q 5	4	Q 102	2	6
dominating	Q 2	6	Q 88	2	7
level-finding	Q 21	2	Q 78	2	10
judgmental	Q 18	3	Q 100	2	6
punitive	Q 9	2	Q 82	2	4

Immature Mode

egocentric	Q 41	2	Q 92	4	6
indecisive	Q 62	2	Q 77	2	2
infantile	Q 1	2	Q 91	2	8
restless	Q 40	2	Q 97	1	4
selfish	Q 10	1	Q 79	2	2
unorganized	Q 105	2	Q 107	1	2

Compliant/Resistant Mode

anxious	Q 71	1	Q 108	2	3
defiant	Q 33	2	Q 86	1	6
inhibited	Q 8	2	Q 27	1	3
placating	Q 56	2	Q 90	2	6
rebellious	Q 11	2	Q 93	2	4
submissive	Q 44	2	Q 82	2	6



# Scoring Sheet For Items In Positive Modes

[Back](#)[Print](#)

## Structuring Mode

authoritative	Q 36	4	Q 75	5	9
consistent	Q 47	4	Q 68	5	9
directive	Q 29	4	Q 73	4	8
firm	Q 48	5	Q 65	5	10
helpful	Q 34	5	Q 83	5	10
inspiring	Q 8	5	Q 81	4	9

## Nurturing Mode

cherishing	Q 69	6	Q 104	4	10
compassionate	Q 13	4	Q 45	5	9
empathic	Q 54	3	Q 64	5	8
encouraging	Q 87	5	Q 94	5	10
protective	Q 30	5	Q 59	6	11
understanding	Q 25	4	Q 88	3	7

## Accounting Mode

alert	Q 32	5	Q 57	5	10
aware	Q 15	5	Q 62	5	10
evaluative	Q 39	6	Q 42	6	12
grounded	Q 55	5	Q 67	2	7
precise	Q 89	5	Q 96	2	7
rational	Q 26	3	Q 66	3	6

## Co-operative Mode

adaptable	Q 35	4	Q 60	5	9
assertive	Q 7	5	Q 101	6	11
confident	Q 12	4	Q 31	4	8
considerate	Q 22	5	Q 74	4	9
friendly	Q 23	5	Q 98	5	10
sociable	Q 16	2	Q 50	6	8

## Spontaneous Mode

creative	Q 4	6	Q 19	6	12
curious	Q 14	5	Q 52	6	11
expressive	Q 20	6	Q 105	6	12
imaginative	Q 3	6	Q 72	4	10
ingenious	Q 76	6	Q 103	5	11
zestful	Q 17	2	Q 28	1	3



Structuring Mode

autonomous	Q 36 4	Q 75 5	9
consistent	Q 47 4	Q 88 5	9
directive	Q 28 4	Q 73 4	8
firm	Q 45 5	Q 65 5	10
helpful	Q 34 5	Q 83 5	10
inspiring	Q 8 5	Q 81 4	9

Nurturing Mode

cheerful	Q 69 6	Q 104 4	10
compassionate	Q 13 6	Q 45 5	9
empathic	Q 54 3	Q 64 5	8
encouraging	Q 87 5	Q 94 5	10
protective	Q 30 5	Q 59 6	11
understanding	Q 25 4	Q 85 5	9

Accounting Mode

alert	Q 32 5	Q 67 5	10
aware	Q 16 5	Q 62 5	10
evaluative	Q 39 6	Q 42 6	12
grounded	Q 63 5	Q 87 5	7
precise	Q 89 5	Q 88 5	7
rational	Q 28 5	Q 68 5	9

Co-operative Mode

adaptable	Q 35 4	Q 60 5	9
assertive	Q 7 5	Q 101 5	11
confident	Q 12 4	Q 31 4	8
considerate	Q 22 5	Q 74 4	9
friendly	Q 23 5	Q 85 5	10
social	Q 18 5	Q 20 5	8

Spontaneous Mode

creative	Q 4 6	Q 19 6	12
curious	Q 14 5	Q 52 6	11
expressive	Q 20 6	Q 105 6	12
imaginative	Q 3 6	Q 72 4	10
ingenious	Q 76 6	Q 103 5	11
zealous	Q 17 5	Q 28 5	9

## **Appendix D Code of Ethics**

### **The Development of a Transactional Analysis Psychometric Tool for Enhancing Functional Fluency**

**1997-2002**

#### **Informed consent: openness and honesty.**

Participants will be informed at every stage about the nature and purpose of the study. Openness and honesty are essential to the implementation of this study.

#### **Right to withdraw: protection from harm.**

Participants will take part by choice and be informed of their right to withdraw at any stage. The instrument to be developed is unlikely to raise sensitive issues or cause distress. Should this happen, however, psychological support will be provided by the researcher who is a trained and experienced counsellor.

#### **Confidentiality.**

Anonymity and confidentiality will be guaranteed, and the research data will be securely stored so that inappropriate access is avoided.

#### **Debriefing.**

Interim results and then the final report on the development of the Functional Fluency Index will be available at the various stages to any interested participants.

# References

*Please note the following:*

*ITA News – Triannual newsletter of the Institute for Transactional Analysis, UK.*

*The Script – Bimonthly newsletter of the International Transactional Analysis Association.*

- Adler, A. (1963) "Individual Psychology", in G. Levitas (ed.), The World of Psychology, George Braziller, NY, USA.
- Allen, J. (2000) "Biology and transactional analysis 2: a status report on neurodevelopment", Transactional Analysis Journal Vol. 30, No. 4, pp 260-269.
- Alt, M. (1990) Exploring Hyperspace, McGraw-Hill, London, UK.
- Amundson, N. E. & Swatzky, D. D. (1976) "An educational program and TA", Transactional Analysis Journal Vol. 6, No. 2, pp 217-220.
- Arnold, T. J. & Simpson, R. L. (1975) "The effects of a TA group on emotionally disturbed school-age boys", Transactional Analysis Journal Vol. 5, No. 3, pp 238-241.
- Ashton, S.G. & Goldberg, L.R. (1973) "The comparative validity of personal scales constructed by the external empirical strategy & scales developed intuitively by experts, novices & laymen", Journal of Research in Personality 7, pp 1-20.
- Ashton-Warner, S. (1965) Teacher, Simon and Shuster, NY, USA.
- Aspy, D. (1972) Toward a Technology for Humanizing Education, Research Press Co., Illinois, USA.
- Aspy, D. & Roebuck, F. (1973) "An investigation of the relationship between student levels of cognitive functioning and the teacher's classroom behaviour", Journal of Educational Research 65, pp 365-368.
- Aspy, D. & Roebuck, F. (1977) Kids don't Learn from People They Don't Like, Human Resource Development Press, Mass., USA.
- Axline, V. (1947) Play Therapy, Ballantine, NY, USA.
- Axline, V. (1969) Dibs: In Search of Self, Ballantine Books, NY, USA.
- Babcock, D. & Keepers, T. (1976) Raising Kids OK, Grove Press, NY, USA.
- Bannister, D. & Fransella, F. (1971) Inquiring Man, Penguin Books, London, UK.
- Barnes, G. et al (1977) Transactional Analysis after Eric Berne, Harper and Row, NY, USA.
- Bartram, D. & Lindley, P. (1994) Validity & Fairness in Testing, British Psychological Society, BPS Books, Leicester, UK.
- Baumrind, D. (1991) "The influence of parenting style on adolescent competence and substance use", in Journal of Early Adolescence 11, pp 56-95.
- Berne, E. (1949) "The Nature of Intuition", The Psychiatric Quarterly 23: 203-226, reprinted in Intuition and Ego States, ed P. McCormick 1977, TA Press, San Francisco, USA.
- Berne, E. (1966) Principles of Group Treatment, Grove Press, NY, USA.
- Berne, E. (1976) Beyond Games & Scripts, ed. Claude Steiner, Ballantine, NY, USA.
- Bettelheim, B. (1950) Love is not Enough, Free Press, NY, USA,.
- Bird, J. & Gerlach, L. (1998) "The Heart of Education", in Primary Practice 15, May 1998.

- Blackledge, V. Y. (1976) "The nature and nurture of the natural child", Transactional Analysis Journal Vol. 6, No. 3, pp 246-252.
- Blaxter, L., Hughes, C., Tight, M. (1996) How to Research, Open University Press, Oxford, UK.
- Brandes, D. Ginnis, P. (1986) Student Centred Learning, Basil Blackwell Ltd., Oxford, UK.
- Brennan, T. & McClenaghan, J. C. (1978) "The Transactional Behaviour Questionnaire", Transactional Analysis Journal Vol. 8, No. 1, pp 52-55.
- Bridges, R. (1929) The Testament of Beauty: a Poem in 4 Books, Clarendon Press, Oxford, UK.
- Briggs, K. C. & Myers, I. B. (1943) Myers-Briggs Type Indicator, Consulting Psychologists Press, Palo Alto, CA, USA.
- Broadfoot, P. (1999) "Culture, learning and comparison: Lawrence Stenhouse's vision of education for empowerment", Stenhouse Memorial Lecture, July 2000, British Educational Research Association, Southwell, Notts, NG25 0EH.
- Bruner, J. S. (1983) Child's Talk: Learning to Use Language, Open University Press, Oxford, UK.
- Burish, M. (1984) "Approaches to personality inventory construction: a comparison of merits", American Psychologist 39, pp 214-229.
- Butler, J. d. (1976) The Construction and Validation of Scales to Measure Transactional Analytic Ego Constancy States, Unpublished PhD Thesis, Oklahoma State University, USA.
- Campbell, R.J. (1999) "Recruitment, retention & reward: issues in the modernisation of primary teaching", Education 3-13, 27:3, pp 24-31.
- Campos, L. & McCormick, P. (1980) Introduce Yourself to TA, Transactional Pubs, CA, USA.
- Capra, F. (1975) The Tao of Physics, Shambala, CA, USA.
- Capra, F. (1996) The Web of Life, Harper Collins, London, UK.
- Carvalho, R. (1990) "Psychodynamic Therapy: the Jungian approach", in W. Dryden, (ed) 1990 Individual Therapy: a Handbook, Open University Press, Oxford, UK.
- Cattell, H. B. (1989) The 16PF: Personality in Depth, Institute for Personality and Ability Testing Champaign, IL, USA.
- Chambers (1959) Chambers' Twentieth Century Dictionary Revised Edition, (ed) W. Geddie, W. & R. Chambers Ltd., London, UK.
- Chardin, T de (1970) Let Me Explain, (ed. & trans. by J.P. Demoulin & others), Fontana Books, London, UK.
- Chess, S. & Thomas, A. (1999) Goodness of Fit: Clinical Applications from Infancy through Adult Life, Brunner/Mazel, Philadelphia, USA, & London, UK.
- Child, D. (1970) The Essentials of Factor Analysis, Holt, Rinehart & Winston Ltd., USA.
- Clarkson, P. & Fish, S. (1988) "Rechilding: creating a new past in the present as a support for the future", Transactional Analysis Journal Vol. 18, No. 1, pp 51-59.
- Clarkson, P. & Gilbert, M. (1988) "Berne's original model of ego states: theoretical considerations", Transactional Analysis Journal Vol.18, No.1, pp 20-29.
- Clarkson, P. (1992) Transactional Analysis Psychotherapy: an Integrated Approach, Routledge, London, UK.
- Clifford, J. (1990) "Adlerian Therapy", in W. Dryden (ed) 1990, Individual Therapy: a Handbook, Open University Press, Oxford, UK.



- Cohen, L. & Manion, L. (1994) Research Methods in Education 4th edition, Routledge, London, UK.
- Conn, S.R. & Rieke, M.L. (1994) eds, The 16PF Fifth Edition Technical Manual, Institute for Personality & Ability Testing Inc., Illinois, USA.
- Corkille Briggs, D. (1977) Celebrate Yourself, Doubleday, NY, USA.
- Cornell, W. (1998) "What we are and what we do", editorial in The Script Vol. XXV111, No. 4, p 2.
- Cox, M. (1999) "The Relationship between Ego State Structure and Function: a Diagrammatic Formulation", Transactional Analysis Journal Vol. 29, No. 1, pp 49-58.
- Curlette, W. L., Kern, R. M. & Wheeler, M. S. (1993) BASIS-A Inventory Interpretive Manual: A Psychological Theory, TRT Associates Highlands, NC, USA.
- Dalkey, N.C. (1972) Studies in the Quality of Life: Delphi and Decision Making, Lexington Books, Lexington, Mass., USA.
- Dennison, G. (1969) The Lives of Children, Vintage Books, NY, USA.
- Denscombe, M. (1998) The Good Research Guide, Open University Press, Oxford, UK.
- Department of Health (2001) Treatment Choice in Psychological Therapies & Counselling: Evidence-based Practice, Department of Health Publications, London.
- Desforges, C. (2000) "Familiar challenges & new approaches: necessary advances in theory & methods in research on teaching & learning", Desmond Nuttall/Carfax Memorial Lecture, British Educational Research Association 2001.
- Dick, B. (2000) Delphi Face to Face, [27.6.01], URL:  
<http://www.scu.edu.au/schods/gcm/ar/arp/delphi.html>
- Dickson, A. (1982) A Woman in Your Own Right: Assertiveness and You, Quartet Books, London, UK.
- Doelker, R. E. & Griffiths, J. (1984) "Development of an instrument to measure ego state functions and its application to practice", Transactional Analysis Journal Vol. 14, No.2 pp 149-153.
- Drego, P. (1979) Towards the Illumined Child- An Indian Study of Ego States, The Grail, Bombay, quoted in Summerton, O. (1988, p 53).
- Drego, P. (1993) "Paradigms and models of ego states", Transactional Analysis Journal Vol. 23, No. 1, pp 5-29.
- Dreikurs, R. (1968) Psychology in the Classroom, Harper and Row, NY, USA.
- Duff, R. (1972) Transactional Analysis for Teachers, Transactional Publications, CA, USA.
- Dulewicz, V. & Higgs, M. (1999) Emotional Intelligence Questionnaire, NFER-NELSON Pub Co. Ltd., Windsor, UK.
- Dunham, J. (1992) Stress in Teaching 2nd edition, Routledge, London, UK.
- Dusay, J. (1972) "Egograms & the constancy hypothesis", Transactional Analysis Journal Vol. 2, No. 3, pp 37-41.
- Dusay, J. (1977) Egograms, Harper and Row, N Y, USA.
- Emerson, J., Bertoch, M. R. & Checketts, K. T. (1994) "Transactional analysis ego state functioning, psychological distress, and client change", Psychotherapy Vol. 31, No. 1, pp 109-113.
- Ernst, K. (1972) Games Students Play, Celestial Arts, CA, USA.

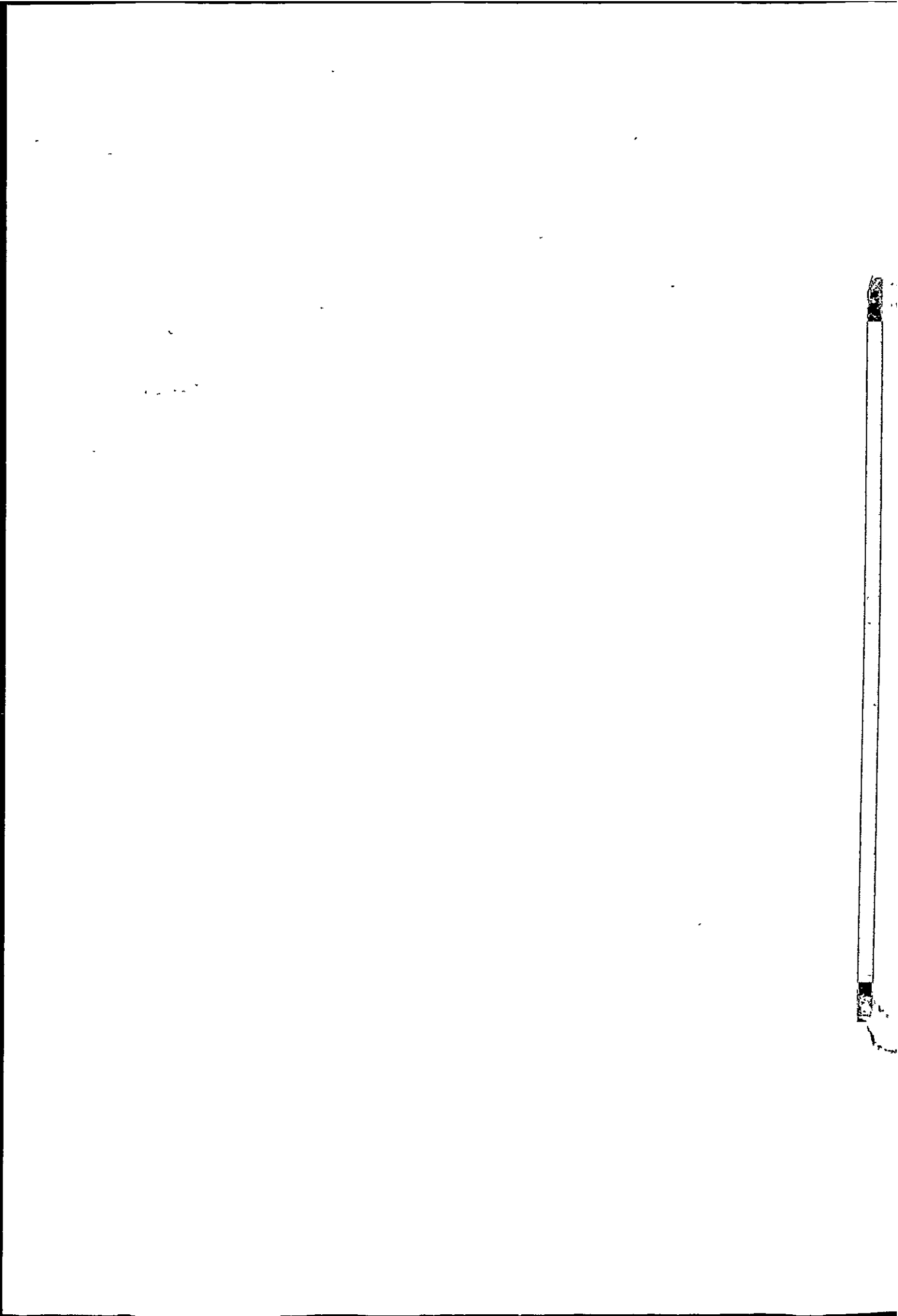
- Erskine, R. & Zalcman, M. (1979) "The Racket System: a Model for Racket Analysis", Transactional Analysis Journal Vol. 9, No. 1, pp 51-59.
- Erskine, R. (1988) "Ego structure, intrapsychic function and defense mechanisms: a commentary on Eric Berne's original theoretical concepts", Transactional Analysis Journal Vol.18, No. 1, pp 15-19.
- Erskine, R. (1997) Theories and Methods of an Integrative Transactional Analysis, TA Press, San Francisco, USA.
- Erskine, R. G. & Moursund, J. P. (1988) Integrative Psychotherapy In Action, Sage, London, UK.
- Erskine, R., Clarkson, P., Goulding, R., Groder, M., Moiso, C. (1988) "Ego state theory: definitions, descriptions & points of view", (1987 conference panel) Transactional Analysis Journal Vol. 18, No. 1, pp 6-14.
- Falkowski, W., Ben-Tovin, D. & Bland, J. (1980) "The assessment of ego states", British Journal of Psychiatry Vol.137, pp 572-573.
- Federn, P. (1952) Ego Psychology and the Psychoses, Basic Books, NY, USA.
- Feeney, S., & Christensen, D. (1979) Who Am I in the Lives of Children, Merrill, Columbus, Ohio, USA.
- Feeney, S., Christensen, D. & Moravik, E. (1996) Who Am I in the Lives of Children: An Introduction to Teaching Young children 5<sup>th</sup> edition, Merrill, Columbus, Ohio, USA.
- Fetsh, R. J. & Sprinkle, S. (1982) "Stroking treatment effects on depressed males", Transactional Analysis Journal Vol. 12, No. 3, pp 213-217.
- Fine, M. J., Covell, G. & Tracy, D. B. (1978) "The effects of TA training on teacher attitudes and behaviour", Transactional Analysis Journal Vol. 8, No. 3, pp 236-240.
- Flaro, L. (1979) "A TA model for evaluating teacher behaviours", Transactional Analysis Journal Vol. 9, No. 3, pp 194-199.
- Fodor, I. (ed) (1992) Adolescent Assertiveness & Social Skills Training: A Clinical Handbook, Springer, NY, USA.
- Foucault, M (1988) "Technologies of the Self" in L.H.Martin, H.Gutman & P.H.Hutton (eds) Technologies of the Self, Tavistock, London, UK.
- Frankl, V. (1984) Man's Search for Meaning 3rd ed, Washington Square Press, USA.
- Franklin, R. M. (1979) Ego States: Construct Validation Within Eric Berne's Theory of Transactional Analysis, Order Number 7923991, Temple University, USA.
- Furnham, A. (1986) "Response bias, social desirability & dissimulation", in Personality, Individual Differences, Vol. 7, No. 3, pp 385-400.
- Gardner, H. (1983) Frames of Mind: The Theory of Multiple Intelligences, Basic Books, N Y, USA.
- Gilbert, M. & Clarkson, P. (1990) "Transactional Analysis", in W. Dryden, (ed) 1990 Individual Therapy: a Handbook, Open University Press, Oxford, UK.
- Gilbert, M. (1996) "Ego states and ego state networks: some questions for the practitioner", Keynote Address at International TA Conference, Amsterdam 15.3.96.
- Ginott, H. (1972) Teacher and Child, Macmillan, NY, USA.
- Glasser, W. (1961) Schools Without Failure, Harper and Row, NY, USA.
- Goleman, D. (1995) Emotional Intelligence, Bloomsbury, London, UK.

- Goleman, D. (1997) Vital Lies, Simple Truths, Bloomsbury, London, UK.
- Goleman, D. (1998) Working with Emotional Intelligence, Bloomsbury, London, UK.
- Gopnik, A., Meltzoff, A. N. & Kuhl, P. K. (1999) The Scientist in the Crib, William Morrow & Co. USA.
- Gordon, T. (1970) Teacher Effectiveness Training, Peter H. Wyden, NY, USA.
- Gough, H.G. (1965) "Conceptual analysis of psychological test scores & other diagnostic variables", in Journal of Abnormal Psychology No. 70, pp 294-302.
- Gough, H. G. & Heilbrun, A. B. (1965) Adjective Check List Manual, Consulting Psychologists Press, Palo Alto, CA, USA.
- Goulding, M. & Goulding, R. (1979) Changing Lives Through Redecision Therapy, Grove Press Inc. NY, USA.
- Graham, C. R. (1976) The construction of the ego state profile: an instrument to objectively measure the functional ego states of transactional analysis, Unpublished PhD Thesis, California School of Professional Psychology, USA.
- Gray, H.L. (1988) Teaching Without Stress, Paul Chapman Publishing, London, UK.
- Gray, C.D. & Kinnear, P.R. (1998) SPSS for Windows Made Simple, Psychology Press Ltd., UK.
- Gregory, J. (2000) "Human science research: a matter of quality", Transactional Analysis Journal Vol. 30, No. 2, pp 150-158.
- Guardian Financial Services (1996) "High Stress in Education is Causing Sickness Among Staff", GFS News Release, 120/96, 2<sup>nd</sup> July 1996.
- Hair et al (1984) Multivariate Data Analysis with Readings, Prentice Hall International, NY, USA.
- Haste, H., Hogan, A. & Zachariou, Y. (2001) "Back again to the future", The Psychologist Vol. 14, No. 1, pp 30-33.
- Hay, J. (1992) Transactional Analysis for Trainers, McGraw Hill International, London, UK.
- Hayes, D. (2001) "Professional Status and an Emerging Culture of Conformity Amongst Teachers in England", Education 3-13 Vol. 29, No. 1, pp 43-49.
- Hay/McBer (1999) Emotional Competency Inventory, Hay/McBer, London, UK.
- Hennig, J. (2001) "Germany after the fall of the wall", The Script Vol. XXX1, No. 2, p 1.
- Heyer, N.R. (1977) Ego States and Attitudes, Unpublished Masters Thesis, Lone Mountain College, San Francisco, USA.
- Heyer, R. N. (1979) "Development of a questionnaire to measure ego states with some applications to social and comparative psychiatry", Transactional Analysis Journal Vol. 9, No. 1, pp 286-293.
- Heyer, R. N. (1987) "Empirical research on ego state theory", Transactional Analysis Journal Vol. 17, No. 1, pp 286-293.
- Hine, J. (1997) "Mind structure and ego states", Transactional Analysis Journal Vol. 27, No. 4, pp 278-289.
- Hogan, R. & Hogan, J. (1995) Hogan Personality Inventory Manual 2nd edition, Hogan Assessment Systems, Tulsa, USA.
- Hogan, R. (1969) "Development of an empathy scale", Journal of Consulting & Clinical Psychology 33, pp 307-316.

- Hogan, R. (1996) Hogan Personality Inventory, UK edition, Psychological Consultancy Ltd., Tunbridge Wells, UK.
- Hogan, R. Hogan, J & Trickey, G. (1999) "Goodbye mumbo-jumbo: the transcendental beauty of a validity coefficient", Selection & Development Review Vol. 15, No. 4, pp 3-8.
- Hohmuth, A. & Gormly, A. (1982) "Ego state models and personality structure", Transactional Analysis Journal Vol. 12, No. 2, pp 140-103.
- Holt, J. (1964) How Children Fail, Penguin Books, Harmondsworth, UK.
- Honey, P. (1995) Using Your Learning Style 3rd edition, Peter Honey, Maidenhead, UK.
- Honey, P. (1986) Honey & Mumford: the Manual of Learning Styles 3rd revised edition, Peter Honey, Maidenhead, UK.
- Howard, G.S., Ralph, K.M., Gulanick, N.A., Maxwell, S.E., Nance, D.W. & Gerber, S.K. (1979) "Internal validity in pretest-posttest self-report evaluations & a re-evaluation of retrospective pretests", Applied Psychological Measurement 3, 1-23.
- Hurley, J. & Porter, H. (1967) "Child ego states in the college classroom", TA Bulletin Vol. 6, No. 21, p 28.
- Illsley Clarke, J & Dawson, C. (1989) Growing Up Again, Hazelden, Minnesota, USA.
- Illsley Clarke, J. (1978) Self Esteem: A Family Affair, Hazelden, Minnesota, USA.
- Institute of Management (2001) Management Statistics FAQs, Tables 3, 4 & 5, URL: [www.inst-mgt.org.uk](http://www.inst-mgt.org.uk), [23.1.02].
- James, M. & Jongeward, D. (1971) Born to Win, Addison-Wesley, NY, USA.
- Johnson, D. (1993) Reaching Out 5th ed, Prentice Hall, New Jersey, USA.
- Joines, V. (1998) "Diagnosis and treatment planning using a transactional analysis framework", Transactional Analysis Journal Vol. 18, No. 3, pp 185-190.
- Jongeward, D. (1976) Everybody Wins: TA Applied to Organisations, Addison-Wesley Co., USA.
- Joseph, R. (1988) Stress Free Teaching: a Practical Guide to Tackling Stress in Teaching; Lecturing and Tutoring, Russell Joseph, London, UK.
- Jung, C.G. (1910) "The association method", American Journal of Psychology 21, pp 219-269.
- Kadis, L. (ed) (1977) Redecision Therapy Expanded Perspectives, Western Institute for Group and Family Therapy, Watsonville, USA.
- Kahler, T. (1977) in Graham Barnes (ed) Transactional Analysis After Eric Berne, Harper & Row, NY, USA.
- Kaiser, S.M. & Woodman, R. W. (1985) "Multidisciplinary teams & group decision-making techniques: possible solutions to decision-making problems", School Psychology Review Vol. 14, No. 4, pp 457-470.
- Karpman, S. (1968) "Fairytales & script drama analysis", TA Bulletin Vol. 7, No. 26, pp 39-43.
- Karpman, S (1971) "Options", Transactional Analysis Journal Vol. 1, No.1, pp 79-87.
- Kaufman, D.N. & Kaufman, J. (1972) "The sources of parenting behaviour: an exploratory study", Transactional Analysis Journal Vol. 2, No. 4, pp 41-45.
- Kelly, G. (1963) A Theory of Personality, W.W. Norton & Co., NY, USA.
- Kenney, W. J. & Lyons, B. F. (1980) "A TA model of school consultation", Transactional Analysis Journal Vol. 10, No. 3, pp 264-269.

- Kent, G.H. & Rosanoff, A.J. (1910) "A study of association in insanity", American Journal of Insanity, 67, 37-96, 317-390.
- Kern, R.M., Wheeler, M.S. & Curlette, W.L. (1993) Basis-A Inventory Interpretive Manual, TRT Associates, 65 Eagle Ridge, Highlands, NC 28741, USA.
- Kolb, D. (1984) Experiential Learning, Prentice Hall, London, UK.
- Kuhn, T. (1962) The Structure of Scientific Revolutions, University of Chicago Press, USA.
- Kyriacou, C. (1996) "Teacher stress: a review of some international comparisons", Education Section Review, Vol. 20, No. 1, 17-20.
- Lanyon, R.I. & Goodstein, L.D. (1997) Personality Assessment, 3rd edition, Wiley & Sons Inc. NY, USA.
- Lapworth, P., Sill, C. & Fish, S. (1993) Transactional Analysis Counselling, Winslow Press, UK.
- LeDoux, J. E. (1994) "Emotion, memory & the brain", Scientific American, June 1994, pp 50-57.
- Leech, A. (1995) "Missing, presumed ill", Education Vol. 185, No. 24, p 11.
- Levin, P. (1988) Cycles of Power, Health Communications, Deerfield Beach, USA.
- Lewis, J. (1999) "Research into the concept of resilience as a basis for the curriculum for children with emotional & behavioural difficulties", Emotional & Behavioural Difficulties Vol. 4, No. 2, pp 11-22.
- Liedloff, J. (1975) The Continuum Concept, Penguin Books, London, UK.
- Loria, B. (1988) "The parent ego state: theoretical foundations and alterations", Transactional Analysis Journal Vol. 18, No. 1, pp 39-46.
- Margerison, C. & McCann, R. (1990) Team Management Profiles Handbook, Prado Systems Ltd., UK.
- Maslow, A. (1968) Toward a Psychology of Being 2nd edition, Van Nostrand Reinhold, USA.
- Maslow, A. (1970) Motivation and Personality 2nd edition, Harper & Row, NY, USA.
- McCormick, J. & Solman, R. (1992) "Teachers' attributions of responsibility for occupational stress & satisfaction: an organisational perspective", Educational Studies Vol. 18 No. 2, pp 201-222.
- McEwen, A. & Thompson, W. (1997) "After the national curriculum: teacher stress & morale", Research in Education, No. 57, pp 57-66.
- McLeod, J. (2001) "An administratively created reality: some problems with the use of self-report questionnaire measures of adjustment in counselling/psychotherapy outcome research", Counselling & Psychotherapy Research Vol. 1, No. 3, pp 215-226.
- McLuhan, M. (1964) Understanding Media, Routledge & Kegan Paul, London, UK.
- Meehl, P.E. (1956) "Wanted – a good cookbook", American Psychologist Vol. 11, pp 263-272.
- Mellor, K. (1980) "Impasses: a developmental and structural understanding", Transactional Analysis Journal Vol. 10, No. 3, pp 213-221.
- Misawa, H. (1981) "Ego states of nurses in nursery schools: a study comparing ego states of nurses and mothers as measured by a transactional analysis ego state questionnaire", Journal of Child Development Vol. 17, pp 24-31.
- Mitchell, P. (1989) "Gardens of the Mind", 4<sup>th</sup> of 6 Conversations with Biologist Louis Wolpert, BBC Radio 3, 13 July 1989.

- Moiso, C. (1985) "Ego states and transference", Transactional Analysis Journal Vol. 15, No. 3, pp 194-201.
- Moiso, C. (1998) "Being and Belonging", excerpt from ITAA Conference. Keynote Speech 3.8.98 in The Script Vol. XXV111 No. 9, p 1.
- Morris, E. (1997) Good Education, Department of Health Publications, London, UK.
- Mruk, C.J. (1999) Self-esteem: Research, Theory and Practice, Free Association Books, London, UK.
- Myers, I.B. & McCaulley, M.H. (1985) Manual: A Guide to the Development & Use of the Myers-Briggs Type Indicator, Consulting Psychologists Press, Palo Alto, CA, USA.
- Neill, A. S. (1960) Summerhill: A Radical Approach to Childrearing, Hart Publishing Co., NY, USA.
- Neuman, W.L. (1994) Social Research Methods 2nd edition, Allyn and Bacon, Boston, USA.
- Noriega-Gayol, G. (1997) "Diagnosis and treatment of ego state boundary problems: effects on self-esteem and quality of life", Transactional Analysis Journal Vol. 27, No. 4, pp 236-240.
- Novey, T. (1998) "Whither Transactional Analysis?", The Script Vol. XXV111, No. 6, p 2.
- Novey, T., Porter-Steele, N., Gobes, L., Massey, R. (1993) "Ego states and the self-concept: a panel presentation and discussion", Transactional Analysis Journal. 23, No. 3, pp 123-138.
- Novey, T. (1999) "The effectiveness of transactional analysis", Transactional Analysis Journal, Vol. 29, No. 1, pp 18-30.
- Nunnally, J. C. (1978) Psychometric Theory, McGraw-Hill, NY, USA.
- Odent, M. (1999) The Scientification of Love, Free Association Books, London, UK.
- Oller-Vallejo, J. (1997) "Integrative analysis of ego state models", Transactional Analysis Journal Vol. 27, No. 4, pp 290-294.
- Paulhus, D.L. (1986) "Self-deception & Impression Management in Test Responses", in A. Angleitner & J.S. Wiggins (eds), Measures of Personality & Social Psychological Attitudes, Academic Press, San Diego, USA.
- Parlett, M. & Page, F (1990) "Gestalt Therapy", in W. Dryden (ed) 1990, Individual Therapy: a Handbook Open University Press, Milton Keynes, UK.
- Porter, N. (1975) "Functional analysis", Transactional Analysis Journal Vol. 5, No. 3, pp 72/3.
- Price, D. A. (1975) "A paper & pencil instrument to measure ego states", Transactional Analysis Journal Vol. 5, No. 3, pp 242-246.
- QCA (1999) The National Curriculum, Qualifications & Curriculum Authority, London, UK.
- Rieke, M.L., Guastello, S.J. & Conn, S.R. (1994) "Interpersonal Skills & Empathy", in S.R. Conn & M.L. Rieke, (eds) 1994 The 16PF Fifth Edition Technical Manual, Institute for Personality & Ability Testing Inc., Illinois, USA.
- Roark, M. L. & Vlahos, S. (1983) "An analysis of the ego states of battered women". Transactional Analysis Journal Vol. 13, No. 3, pp 164-167.
- Rogers, C. (1951) Client-Centred Therapy Constable, London, UK.
- Roget P. M. (1987) Roget's Thesaurus of English Words and Phrases, Revised and edited by B. Kirkpatrick, Penguin Books, London, UK.



- Rotter, J.B. (1966) "Generalised expectancies for internal versus external control of reinforcement", in Psychological Monographs 1966 No.80 p.609.
- Sambin, M. & Rocco, D. (2000) "Research in TA: Current Status", ITAA Conference Presentation, Halifax, Nova Scotia.
- Sarbin, T.R. (1968) "Ontology recapitulates philology: the mythic nature of anxiety", American Psychologist No. 23, pp 411-418.
- Schaefer, C. (1976) "The development of a transactional analysis scale for the adjective check list", The Journal of Psychology Vol. 94 pp 59-63.
- Schaffer, H.R. (1996) Parental Styles and Their Consequences, Blackwell:Publications, London, UK.
- Schiff, J. et al (1975) The Cathexis Reader: Transactional Analysis Treatment of Psychosis, Harper & Row, NY, USA.
- Spender, D. (1982) Invisible Women, Writers and Readers, London, UK.
- Steinberg, A. (1996) Beyond the Classroom: Why School Reform has Failed & What Parents Need to Do, Touchstone, NY, USA.
- Steiner, C. (1971) TA Made Simple, Transactional Pubs, CA, USA.
- Steiner, C. (1971) Games Alcoholics Play, Ballantine Books, NY, USA.
- Steiner, C. (1972) "Scripts revisited", Transactional Analysis Journal Vol. 2, No. 2, pp 83-86.
- Steiner, C. (1974) Scripts People Live: Transactional Analysis of Life Scripts, Grove Press, NY, USA.
- Steiner, C. (1977) The Warm Fuzzy Tale, Jalmar Press, CA, USA.
- Steiner, C. (2000) "A meditation on the adult and its corruption", The Script Vol. XXX, No. 9, p 3.
- Stenhouse, L.A. (1967) Culture and Education, Nelson, London, UK.
- Stern, D. (1985) The Interpersonal World of the Infant, Basic Books, USA.
- Stewart, I. & Joines, V. (1987) TA Today, Lifespace, Nottingham, UK.
- Stewart, I. (1992) Eric Berne, Sage Publications, London, UK.
- Stewart, I. (2001) "Ego states and the theory of theory: the strange case of the little professor", Transactional Analysis Journal Vol. 31, No. 2, pp 133-147.
- Stokes, D. E. (1997) Pasteur's Quadrant: Basic Science & Technical Innovation, Brookings, Washington DC, USA.
- Summerton, O. (1988) TA Basic Concepts Plus, Oyster Publications, Bombay, India.
- Tallent, N. (1958) "On individualising the psychologist's clinical evaluation", Journal of Clinical Psychology 14, 243-244.
- Temple, S. (1990) "Being in Charge", ITA News No 27, pp 21-23, Summer 1990.
- Temple, S. (1999) "Functional fluency for educational transactional analysts", Transactional Analysis Journal Vol. 29, No. 3, pp 164-174.
- Thomas, A. & Chess S. (1999) Goodness of Fit, Brunner/Mazel, PA, USA.
- Thomas, A., Chess, S. & Birch, H. (1968) Temperament and Behaviour Disorders in Children, University Press, NY, USA.



- Thomson, G. (1972) "The identification of ego States in transactional analysis", Transactional Analysis Journal Vol. 2, No. 4, pp 176-211.
- Thorne, S. & Faro, S. (1980) "The ego state scale: a measure of pathology", Transactional Analysis Journal Vol. 10, No. 1, pp 49-52.
- Tilney, A. & Phillips, S. (1998) "The Athene myth", ITA News, Number 51, pp 19-22, Summer 1998.
- Tilney, A. (1998) A Dictionary of TA, Whurr, London, UK.
- Tilney, A. (1999) "Truth and domain-specific theories", The Script Vol. XXIX, No. 6, p 3.
- Tilney, A. (2000) "The hidden mind", The Script Vol. XXX, No. 6, p 3.
- Tilney, A. (2000) "But why, mummy?", The Script Vol. XXX No. 7, p 3.
- Tilney, A. (2000) "Letter from the Editor", Transactional Analysis Journal Vol. 30, No. 1, p 3.
- Tilney, A. (2001) "Dictionaries and creeds: what are core concepts, and do we need them?", The Script Vol. XXX1, No. 6, p 3.
- Totton, N. & Jacobs, M. (2001) Character and Personality Types, Open University Press, Buckingham, UK.
- Trautmann, R. & Erskine, R. (1981) "Ego state analysis: a comparative view", Transactional Analysis Journal Vol. 11, No. 2, pp 178-185.
- Wagner, A. (1994) "Blue ego states for effective communication", Transactional Analysis Journal Vol. 24, No. 4, pp 281-284.
- Walker, S. (2001) "Tracing the contours of postmodern social work", British Journal of Social Work, Vol. 31, No. 1, pp 29-39.
- Ware, P. (1983) "Personality adaptations", in Transactional Analysis Journal Vol.13, No. 1, pp 11-19.
- Watkin, C. (1999) Review of "Emotional Competency Inventory (ECI)", in Selection and Development Review, Vol. 15, No. 5, pp 13-16.
- Webb, E. (1915) "Character and intelligence", British Journal of Psychology, Monograph Supplement, 3.
- Weare, K. (2000) Promoting Mental, Emotional & Social Health: A Whole School Approach, Routledge, London, UK.
- Weiss, E. (1950) Principles of Psychodynamics, Grune & Stratton, NY, UK.
- White, D.P. (2000) Racketeering in police training: a TA inquiry into the processes which inhibit learning in police culture, M.Ed. Dissertation, University of Plymouth.
- Williams, J. E., Watson, J. R., Walters, P. A., Williams, J. G. (1983) "Construct validity of transactional analysis ego states: Free Child, Adult and Critical Parent", Transactional Analysis Journal Vol. 13, No. 1, pp 43-49.
- Williams, K. B. & Williams, J. E. (1980) "The assessment of transactional analysis ego states via the adjective check list", Journal of Personality Assessment Vol. 44, No. 2, pp 120-129.
- Wood, D. (1986) "Aspects of Teaching & Learning", in Richards, M. & Light, P. (eds) 1986 Children of Social Worlds, pp 191-212. Polity Press, Cambridge, UK.
- Woodworth, R.S. (1919) "Examination of emotional fitness for warfare", Psychological Bulletin 16, pp 59-60.

- Wollams, S. & Brown, M: (1979) The Total Handbook of TA, Spectrum, MI, USA.
- Wollams, S., Brown, M. & Huige, K. (1976) Transactional Analysis in Brief, Spectrum Psychological Services, Ypsilanti, MI, USA.
- Yeomans, K. A. (1977) Statistics for Social Scientists – Introducing Statistics, (1st ed 1968) Penguin UK.
- Yin, R. K. (1994) Case Study Research: Design & Methods, 2nd edition, Sage, London, UK.