

# CONTENTS

<b>PREFACE TO THE SECOND EDITION</b>	<b>xiii</b>
<b>PREFACE</b>	<b>xv</b>
<b>ACKNOWLEDGMENTS</b>	<b>xvii</b>
<b>Introduction</b>	<b>1</b>
I.1 Designing a Survey	4
I.1.1 Choice of a Topic	4
I.1.2 Choice of the Most Important Variables	4
I.1.3 Choice of a Data Collection Method	5
I.1.4 Choice of Operationalization	6
I.1.5 Test of the Quality of the Questionnaire	8
I.1.6 Formulation of the Final Questionnaire	9
I.1.7 Choice of Population and Sample Design	9
I.1.8 Decide about the Fieldwork	10
I.1.9 What We Know about These Decisions	10
I.1.10 Summary	11
Exercises	12
<b>PART I THE THREE-STEP PROCEDURE TO DESIGN REQUESTS FOR ANSWERS</b>	<b>13</b>
<b>1 Concepts-by-Postulation and Concepts-by-Intuition</b>	<b>15</b>
1.1 Concepts-by-Intuition and Concepts-by-Postulation	15
1.2 Different Ways of Defining Concepts-by-Postulation through Concepts-by-Intuition	19



1.2.1 Job Satisfaction as a Concept-by-Intuition	19
1.2.2 Job Satisfaction as a Concept-by-Postulation	20
1.3 Summary	27
Exercises	28
<b>2 From Social Science Concepts-by-Intuition to Assertions</b>	<b>30</b>
2.1 Basic Concepts and Concepts-by-Intuition	31
2.2 Assertions and Requests for an Answer	32
2.3 The Basic Elements of Assertions	33
2.3.1 Indirect Objects as Extensions of Simple Assertions	36
2.3.2 Adverbials as Extensions of Simple Assertions	37
2.3.3 Modifiers as Extensions of Simple Assertions	37
2.3.4 Object Complements as Extensions of Simple Assertions	38
2.3.5 Some Notation Rules	38
2.4 Basic Concepts-by-Intuition	39
2.4.1 Subjective Variables	40
2.4.2 Objective Variables	47
2.4.3 In Summary	49
2.5 Alternative Formulations for the Same Concept	49
2.6 Extensions of Simple Sentences	51
2.6.1 Adding Indirect Objects	51
2.6.2 Adding Modifiers	52
2.6.3 Adding Adverbials	52
2.7 Use of Complex Sentences	53
2.7.1 Complex Sentences with No Shift in Concept	54
2.7.2 Complex Sentences with a Shift in Concept	54
2.7.3 Adding Conditions to Complex Sentences	56
2.8 Summary	56
Exercises	57
<b>3 The Formulation of Requests for an Answer</b>	<b>60</b>
3.1 From Concepts to Requests for an Answer	61
3.2 Different Types of Requests for an Answer	63
3.2.1 Direct Request	63
3.2.2 Indirect Request	66
3.3 The Meaning of Requests for an Answer with WH Request Words	69
3.3.1 "When," "Where," and "Why" Requests	70
3.3.2 "Who" Requests	70
3.3.3 "Which" Requests	70
3.3.4 "What" Requests	71
3.3.5 "How" Requests	72
3.4 Summary	74
Exercises	75



## **PART II CHOICES INVOLVED IN QUESTIONNAIRE DESIGN 77**

### **4 Specific Survey Research Features of Requests for an Answer 79**

- 4.1 Select Requests from Databases 79
- 4.2 Other Features Connected with the Research Goal 81
- 4.3 Some Problematic Requests 83
  - 4.3.1 Double-Barreled Requests 83
  - 4.3.2 Requests with Implicit Assumptions 84
- 4.4 Some Prerequisites Change the Concept-by-Intuition 85
- 4.5 Batteries of Requests for Answers 86
  - 4.5.1 The Use of Batteries of Stimuli 87
  - 4.5.2 The Use of Batteries of Statements 88
- 4.6 Other Features of Survey Requests 92
  - 4.6.1 The Formulation of Comparative or Absolute Requests for Answers 92
  - 4.6.2 Conditional Clauses Specified in Requests for Answers 93
  - 4.6.3 Balanced or Unbalanced Requests for Answers 93
- 4.7 Special Components within the Request 95
  - 4.7.1 Requests for Answers with Stimulation for an Answer 95
  - 4.7.2 Emphasizing the Subjective Opinion of the Respondent 95
- 4.8 Summary 96
- Exercises 96

### **5 Response Alternatives 98**

- 5.1 Open Requests for an Answer 99
- 5.2 Closed Categorical Requests 101
  - 5.2.1 Nominal Categories 103
  - 5.2.2 Ordinal Scales 104
  - 5.2.3 Continuous Scales 108
- 5.3 How Many Categories Are Optimal? 111
- 5.4 Summary 112
- Exercises 114

### **6 The Structure of Open-Ended and Closed Survey Items 115**

- 6.1 Description of the Components of Survey Items 115
- 6.2 Different Structures of Survey Items 118
  - 6.2.1 Open-Ended Requests for an Answer 119
  - 6.2.2 Closed Survey Items 120
  - 6.2.3 The Frequency of Occurrence 124
  - 6.2.4 The Complexity of Survey Items 125
- 6.3 What Form of Survey Items Should Be Recommended? 126
- 6.4 Summary 127
- Exercises 128



<b>7</b>	<b>Survey Items in Batteries</b>	<b>130</b>
7.1	Batteries in Oral Interviews	131
7.2	Batteries in Mail Surveys	134
7.3	Batteries in CASI	138
7.4	Summary and Discussion	142
	Exercises	144
<b>8</b>	<b>Mode of Data Collection and Other Choices</b>	<b>146</b>
8.1	The Choice of the Mode of Data Collection	147
8.1.1	Relevant Characteristics of the Different Modes	148
8.1.2	The Presence of the Interviewer	149
8.1.3	The Mode of Presentation	151
8.1.4	The Role of the Computer	152
8.1.5	Procedures without Asking Questions	155
8.1.6	Mixed-Mode Data Collection	155
8.2	The Position in the Questionnaire	156
8.3	The Layout of the Questionnaire	158
8.4	Differences due to Use of Different Languages	158
8.5	Summary and Discussion	159
	Exercises	160
<b>PART III</b>	<b>ESTIMATION AND PREDICTION OF THE QUALITY OF QUESTIONS</b>	<b>163</b>
<b>9</b>	<b>Criteria for the Quality of Survey Measures</b>	<b>165</b>
9.1	Different Methods, Different Results	166
9.2	How These Differences Can Be Explained	173
9.2.1	Specifications of Relationships between Variables in General	173
9.2.2	Specification of Measurement Models	175
9.3	Quality Criteria for Survey Measures and Their Consequences	178
9.4	Alternative Criteria for Data Quality	181
9.4.1	Test-Retest Reliability	181
9.4.2	The Quasi-simplex Approach	182
9.4.3	Correlations with Other Variables	183
9.5	Summary and Discussion	184
	Exercises	185
	Appendix 9.1 The Specification of Structural Equation Models	187
<b>10</b>	<b>Estimation of Reliability, Validity, and Method Effects</b>	<b>190</b>
10.1	Identification of the Parameters of a Measurement Model	191
10.2	Estimation of Parameters of Models with Unmeasured Variables	195
10.3	Estimating Reliability, Validity, and Method Effects	197
10.4	Summary and Discussion	201
	Exercises	202



Appendix 10.1	Input of Lisrel for Data Analysis of a Classic MTMM Study	205
Appendix 10.2	Relationship between the TS and the Classic MTMM Model	205
<b>11</b>	<b>Split-Ballot Multitrait–Multimethod Designs</b>	<b>208</b>
11.1	The Split-Ballot MTMM Design	209
11.1.1	The Two-Group Design	209
11.1.2	The Three-Group Design	210
11.1.3	Other SB-MTMM Designs	211
11.2	Estimating and Testing Models for Split-Ballot MTMM Experiments	212
11.3	Empirical Examples	213
11.3.1	Results for the Three-Group Design	213
11.3.2	Two-Group SB-MTMM Design	215
11.4	The Empirical Identifiability and Efficiency of the Different SB-MTMM Designs	218
11.4.1	The Empirical Identifiability of the SB-MTMM Model	218
11.4.2	The Efficiency of the Different Designs	221
11.5	Summary and Discussion	221
	Exercises	222
	Appendix 11.1 The Lisrel Input for the Three-Group SB-MTMM Example	222
<b>12</b>	<b>MTMM Experiments and the Quality of Survey Questions</b>	<b>225</b>
12.1	The Data from the MTMM Experiments	226
12.2	The Coding of the Characteristics of the MTMM Questions	229
12.3	The Database and Some Results	230
12.3.1	Differences in Quality across Countries	231
12.3.2	Differences in Quality for Domains and Concepts	234
12.3.3	Effect of the Question Formulation on the Quality	235
12.4	Prediction of the Quality of Questions Not Included in the MTMM Experiments	237
12.4.1	Suggestions for Improvement of Questions	239
12.4.2	Evaluation of the Quality of the Prediction Models	240
12.5	Summary	241
	Exercises	242
<b>PART IV</b>	<b>APPLICATIONS IN SOCIAL SCIENCE RESEARCH</b>	<b>243</b>
<b>13</b>	<b>The SQP 2.0 Program for Prediction of Quality and Improvement of Measures</b>	<b>245</b>
13.1	The Quality of Questions Involved in the MTMM Experiments	246
13.1.1	The Quality of Specific Questions	246
13.1.2	Looking for Optimal Measures for a Concept	250



13.2	The Quality of Non-MTMM Questions in the Database	252
13.3	Predicting the Quality of New Questions	256
13.4	Summary	261
	Exercises	262
<b>14</b>	<b>The Quality of Measures for Concepts-by-Postulation</b>	<b>263</b>
14.1	The Structures of Concepts-by-Postulation	264
14.2	The Quality of Measures of Concepts-by-Postulation with Reflective Indicators	264
14.2.1	Testing the Models	265
14.2.2	Estimation of the Composite Scores	268
14.2.3	The Quality of Measures for Concepts-by-Postulation	270
14.2.4	Improvement of the Quality of the Measure	274
14.3	The Quality of Measures for Concepts-by-Postulation with Formative Indicators	276
14.3.1	Testing the Models	278
14.3.2	Estimation of the Composite Score	281
14.3.3	The Estimation of the Quality of the Composite Scores	282
14.4	Summary	283
	Exercises	284
	Appendix 14.1 Lisrel Input for Final Analysis of the Effect of "Social Contact" on "Happiness"	284
	Appendix 14.2 Lisrel Input for Final Analysis of the Effect of "Interest in Political Issues in the Media" on "Political Interest in General"	285
<b>15</b>	<b>Correction for Measurement Errors</b>	<b>287</b>
15.1	Correction for Measurement Errors in Models with only Concepts-by-Intuition	287
15.2	Correction for Measurement Errors in Models with Concepts-by-Postulation	292
15.2.1	Operationalization of the Concepts	292
15.2.2	The Quality of the Measures	294
15.2.3	Correction for Measurement Errors in the Analysis	297
15.3	Summary	298
	Exercises	299
	Appendix 15.1 Lisrel Inputs to Estimate the Parameters of the Model in Figure 15.1	300
	Appendix 15.2 Lisrel Input for Estimation of the Model with Correction for Measurement Errors using Variance Reduction by Quality for all Composite Scores	301



<b>16 Coping with Measurement Errors in Cross-Cultural Research</b>	<b>302</b>
16.1 Notations of Response Models for Cross-Cultural Comparisons	303
16.2 Testing for Equivalence or Invariance of Instruments	307
16.2.1 The Standard Approach to Test for Equivalence	307
16.3 Problems Related with the Procedure	309
16.3.1 Using Information about the Power of the Test	309
16.3.2 An Alternative Test for Equivalence	315
16.3.3 The Difference between Significance and Relevance	317
16.4 Comparison of Means and Relationships across Groups	318
16.4.1 Comparison of Means and Relationships between Single Requests for Answers	318
16.4.2 Comparison of Means and Relationships Based on Composite Scores	319
16.4.3 Comparison of Means and Relationships between Latent Variables	321
16.5 Summary	324
Exercises	325
Appendix 16.1 The Two Sets of Requests Concerning “Subjective Competence”	326
Appendix 16.2 ESS Requests Concerning “Political Trust”	327
Appendix 16.3 The Standard Test of Equivalence for “Subjective Competence”	328
Appendix 16.4 The Alternative Equivalence Test for “Subjective Competence” in Three Countries	329
Appendix 16.5 Lisrel Input to Estimate the Null Model for Estimation of the Relationship between “Subjective Competence” and “Political Trust”	331
Appendix 16.6 Derivation of the Covariance between the Composite Scores	333
<b>REFERENCES</b>	<b>336</b>
<b>INDEX</b>	<b>352</b>