## **Contents**

List of contributors Editorial preface		page ix	
		xi	
1 Met	hodological issues in studying nonverbal behavior		
KLA	US R. SCHERER AND PAUL EKMAN	1	
1.1	A selective historical sketch of methodological developme	ent	
	in nonverbal behavior research	1	
1.2	Basic issues in studying nonverbal behavior	7	
1.3	Sampling nonverbal behavior	16	
	Measuring nonverbal behavior	33	
1.5	Some comments on data analysis	39	
1.6	Conclusions	40	
2 Met	hods for measuring facial action	45	
PAU	L EKMAN		
2.1	Introduction	45	
2.2	The basis for deriving units	52	
2.3	Comprehensiveness or selectivity	55	
2.4	Depicting facial measurement units	62	
	Separating inference from description	63	
2.6	Types of records and persons to which measurement has	S	
	been applied	66	
2.7	Reliability	68	
2.8	Validity	73	
2.9	Costs	77	
	Other techniques for facial measurement	78	
2.11	Conclusions	83	
	Appendix: How the facial action brow raise is described in	n	
	each of the 15 measurement techniques	83	

3	The assessment of gaze and mutual gaze	91
	RALPH V. EXLINE AND B. J. FEHR	
	3.1 Influences of theoretical perspectives	94
	3.2 Context of measurement: field versus laboratory	100
	3.3 Use of a confederate versus another naive subject	104
	3.4 One-way versus two-way interaction	109
	3.5 Choice of behaviors measured	110
	3.6 Behavioral observation	121
	3.7 Data-recording equipment	127
	3.8 Conclusions	129
4	Methods of research on vocal communication: paradigms and	
	parameters	136
	KLAUS R. SCHERER	
	4.1 The social functions of vocal behavior	137
	4.2 A paradigm for the study of nonverbal behavior	141
	4.3 The segmentation of vocal behavior	142
	4.4 Levels of description of vocal behavior	145
	4.5 The physiological and phonatory-articulatory levels	146
	4.6 The acoustic level of description	149
	4.7 Proximal cues of vocalization characteristics	171
	4.8 Inferences and attributions based on vocal behavior	175
	4.9 Relationships between vocal and nonvocal nonverbal behaviors	179
	Appendix A. The process of voice production	182
	Appendix B. A short introduction to speech acoustics	186
	Appendix C. Measurement procedures and equipment	189
5	5 Measurement of body motion and orientation	199
	HOWARD M. ROSENFELD	400
	5.1 Introduction	199
	5.2 Fundamental issues in measuring movement	203
	5.3 Observational measurement	215
	5.4 Physical tools of measurement and analysis	227
	5.5 Quantitative analysis	236
	5.6 Research applications	240
	5.7 Models and systems of measurement	242
	5.8 Conclusions	275

	Contents	vii
6	Conducting judgment studies	287
	ROBERT ROSENTHAL	
	6.1 The nature of judgment studies	287
	6.2 Sampling judges	292
	6.3 Sampling encoders	301
	6.4 Simultaneous sampling	307
	6.5 Stimulus selection	316
	6.6 Stimulus presentation	320
	6.7 Judges' responses	331
	6.8 The analysis of individual and sets of judgment studies	354
7	Categories and sequences of behavior: methods of description	
	and analysis	362
	J. A. R. A. M. VAN HOOFF	242
	7.1 Introduction	362
	7.2 Behavior and behavioral interaction: a string of events in time	363
	7.3 How to delimit behavior events and sample them	365
	7.4 Sequential analysis: transition frequencies and behavior	368
	path diagrams	
	7.5 Categories of behavior	379
	<ul><li>7.6 Sequential analyses: advanced event-based approaches</li><li>7.7 Time as a factor in the interdependence of behavioral</li></ul>	396
	events	411
	7.8 The phrase structure grammar model	422
	7.9 Conclusions	430
8	The organization of behavior in face-to-face interaction:	
	observations on the development of a methodology	440
	ADAM KENDON	
	8.1 The structural approach to analysis to face-to-face	
	interaction	441
	8.2 Sources of influence: a historical sketch	443
	8.3 Investigating greetings: a methodological case study	467
	8.4 Conclusions	492
9	Conversation analysis	506
	CANDACE WEST AND DON H. ZIMMERMAN	
	9.1 Introduction	506

## viii Contents

9.2 Empirical focus	507	
9.3 Ethnomethodology	510	
9.4 Method and measurement	514	
9.5 Analysis	518	
9.6 Conversation analysis and nonverbal communication	528	
9.7 Concluding remarks	535	
Appendix. Transcribing conventions	535	
	•	
Technical Appendix. Audiovisual recording: procedures, equipmen		
and troubleshooting	542	
HARALD G. WALLBOTT		
A.1 Basic considerations	542	
A.2 Visual records: comparison of cinema and video	544	
A.3 Special issues in obtaining visual records	551	
A.4 Issues in audio recording	557	
A.5 Troubleshooting	567	
A.6 Field recordings	570	
A.7 Ethical concerns	573	
A.8 Selected sources on technical aspects of audiovisual		
recording	576	
Name index	58	
	588	
Subject index		