Preface to the Third Edition		xxvii
Par	t I. BASIC CONCEPTS	
1.	Who Uses Tests?	3
	Typical Test Users 3	
	Evolution of the Testing Enterprise 9	
	Purchasing Tests 13	
	Sources of Information About Tests 13	
	Who May Obtain Tests? 15	
2.	Purposes and Types of Tests	22
	Decisions for Which Tests Are Used 22	
	Selection and Classification of Persons 23	
	Evaluation of Treatments 24	
	Checking on Scientific Hypotheses 24	
	What Is a Test? 25	
	Standardization and Objectivity 26	
	Psychometric vs. Impressionistic Testing 29	
	Classification of Tests 35	
	Tests of Ability 35	
	Tests of Typical Performance 38	

viii

3.	Administering Tests	44
	Two Specimen Tests 45	
	Mechanical Comprehension Test 46	
	Block Design Test 48	
	Procedure for Test Administration 50	
	Conditions of Testing 50	
	Control of the Group 52	
	Directions to the Subject 53	
	Judgments Left to the Examiner 54	
	Guessing 56	
	Motivation for Taking a Test 60	
	Incentives that Raise Scores 60	
	Motives that Reduce Scores 61	
	Preparing the Subject for the Test 66	
	Testing Procedure as Standardization of Behavior	69
	Testing as a Social Relationship 70	
	The Computer as Tester 73	
4.	Scoring	78
	Scoring Procedures 78	
	Scoring of Constructed Responses 78	
	Scoring of Choice-Response Items 79	
	Interpretation of Scores 82	
	Raw Scores 82	
	Criterion Reference 84	
	Percentile Scores 89	
	Standard Scores 94	
	The Normal Distribution 98	
	Comparison of Systems 102	
	Profiles 102	
	Norms 104	
	Characteristics of Useful Norms 104	
	What the Manual Should Report 108	
	Norms by Calibration 110	
	Obsolescence of Norms 112	
5.	Test Validation	115
	Need for Critical Evaluation of Tests 115	
	The Test Manual 117	
	The Test Standards 119	
	Test Reviews 121	
	Types of Validation 121	
	**	

Contents ix

	Validation Against a Criterion 126  The Criterion 126  Correlation Coefficients 128  Typical Validity Coefficients 135  Construct Validation 142  Content Validation 145	
6.	Other Characteristics Desired in Tests  An Interpretation of "Error of Measurement" 151  Sources of Variance 152  The Universe Score as the Desired Information 153  The Standard Error of Measurement 155  Coefficients of Reliability or Generalizability 156  Estimation Procedures 157  Estimation from Observations on One Pupil 157  Estimation from a Two-way Score Table 158  More Complex Procedures 162  Interpreting Findings on Reliability 163  Meaning of the Standard Error 163	151
	Meaning of the Coefficient 165 Effects of Changing the Number of Observations 167 Alternative Experimental Procedures and Their Implications 1 The Bandwidth-Fidelity Dilemma 179 Other Considerations in Test Selection 182 Appeal to the Layman 182 Ease of Application 184 Equivalent or Comparable Forms 185 Cost 185 Evaluating a Test 186	173
Par	II. TESTS OF ABILITY	
7.	General Ability: Appraisal Methods The Emergence of Mental Testing 197  Tests Before Binet 197  Binet Defines Intelligence 200  Interest in Selecting the Talented 202  Wechsler's Scales for Clinical Appraisal 206  Description of the Wechsler and Binet Scales 208  Wechsler Test Materials and Procedure 208  Stanford-Binet Materials and Procedure 211	197

x Contents

	The Intelligence Quotient and Other Scores 215  The IQ as a Standard Score 215  Mental Age 220  Wechsler Scaled Scores 221  Precision of Scores 222	
8.	General Ability: Research and Theory Consistency and Change in Test Scores 227  Test Intercorrelations 227  Changes with Age 228 Practical Correlates 234 Processes Considered in Test Interpretation 238  Proposals to Subdivide the IQ 238  Piaget's Account of Intellectual Development 242  The Role of Task Familiarity 246  Influence of the Culture 246  Diagnosis of Styles and Disorders 248  Summary Evaluation and List of Individual Tests 252	227
	Intellectual Development in Early Childhood 255  Testing in Infancy 257  Preschool Testing 262	
9.	General Ability: Group Tests and Their Use Representative Instruments 269  A Homogeneous Test: Matrices 269  A Two-Score Test: Lorge-Thorndike 272  Two College Admission Tests 274  A List of Group Tests 276  The Spectrum of Ability Tests 281  Overlap of General-Ability Tests and Achievement Tests 283  Problems of Design and Validity 285	268
	Comparability of Scores 285 Degree of Speeding 286 Stability 286 Predictive Validity 289 The Need for Multitrait-Multimethod Validation 296 Tests and Cultural Differences 298 The Issue of Fair Employment Practice 298 Testing in Developing Nations 301 Testing the Disadvantaged Child in School 302	
10.	Factor Analysis: The Sorting of Abilities Theory of Factor Analysis 310 Interpreting Sets of Correlations 310 Three Types of Factors 312	309

	The Machinery of Factor Analysis 315	
	Analysis of Lorge-Thorndike Data 320	
	Decisions Required 321	
	Factors in Three Air Force Tests 323	
	The Prominent Systems of Factors 325	
	Systems of Parallel Factors 325	
	The French Kit of Reference Tests 327	
	The Hierarchical View 331	
	The Guilford Search Model 335	
	•	
	An Approach to Deeper Theoretical Analysis 345  A "Simulation" Model for Bead-Chain Performance 347	
	A Simulation Model for Dead-Chain I erformance 347	
11.	Ability Profiles in Guidance	353
	Representative Batteries 353	
	The Differential Aptitude Tests 353	
	The General Aptitude Test Battery 355	
	Validity of Specialized Tests 360	
	Spatial Ability 360	
	Mechanical Comprehension 364	
	Interpretation of Profiles in Individual Decisions 365	
	Limitations on Interpretation 366	
	Differential Prediction 371	
	Explaining the Score Profile 373	
	A List of Guidance Batteries 376	
	Helping Counselees Use Test Information 376	
	Client-Centered Counseling 376	
	Fact-Centered Counseling 380	
12.	Other Special Abilities	<b>384</b>
	Psychomotor Abilities 384	
	A Factorial Classification 384	
	Tests of Speed and Simple Control 386	
	Complex Performance 388	
	General Problems of Psychomotor Testing	
	Apparatus Differences 391	
	Pencil-Paper Measures of Motor Performance 391	
	Trial-to-Trial Consistency 391	
	Validity 393	
	The Search for Creativity 394	
	Tests of Divergent Thinking 395	
	Artistic Abilities 400	
	Special Aptitude Tests for Courses and Professions 403	
	• •	

xii

13.	Personnel Selection and Classification		406
	Procedures in Prediction Research 407		
	Job Analysis 407		
	Choice of Tests for Tryout 410		
	Experimental Trial 411		
	The Criterion 413		
	Development of an Aptitude Test for Computer Programmers	417	
	Drawing Conclusions from Selection Tests 421		
	Strategy of Decision Making 421		
	Combining Predictor Data 425		
	Interpreting Selection Studies 429		
	What Is an Acceptable Validity Coefficient? 429		
	Necessity for Confirmation of Findings 433		
	Unconventional Handling of Selection Data 434		
	Nonlinear Treatment of Predictors 434		
	Sequential Strategies 441		
	Nonstatistical Combinations of Scores 441		
	Multiple Criteria 443		
	Classification Decisions 445		
	Differential Validity 445		
	Aptitude-Treatment Interactions 447		
_	·		
Part	III. TESTING OF TYPICAL PERFORMANCE		
14.	Interest Inventories		455
	Construction from Content Specifications 456		
	Construction with Homogeneous Item Clusters 457		
	Kuder Inventories C and E 457		
	Criterion Keying 460		
	The Strong Blank for Men 460	•	
	The Occupational Interest Survey 466		
	Validity of Interest Measures 468		
	Stability of Interests 468		
	Correlations Across Inventories 471		
	Prediction of Vocational Criteria 471		
	Prediction of Academic Criteria 477		
	Interests and Personality 477		
	Interest Inventories in Counseling 481		
	A List of Inventories 483		
	New Directions in Interest Measurement 484		
	Alternatives in Keying 484		
	Absolute Profiles 486		

15.	General Problems in Studying Personality	489
	Types of Data 489	
	Observations in Representative Situations 489	
	Reports from Others and from the Subject 491	
	Performance Tests 491	
	The Self-Description: Report of Typical Behavior? 493	
	Response Biases 495	
	Taking Biases and Distortions into Account 498	
	Alternative Interpretations of Response Content 503	
	Interpretation as "Published" Self-Concept 503	
	Dynamic Interpretation 504	
	Actuarial Interpretation of Responses as Signs 506	
	Ethical Issues 509	
	Respecting the Dignity of Persons Tested 511	
	How Permissible Is Deception? 513	
	Limits on Freedom of Scientific Inquiry 514	
	Questionnaire Data as a Source for the Theorist 516	
16.	Personality Measurement Through Self-Report	520
-0.	History of Personality Inventories 520	
	Adjustment Inventories 520	
	Trait Descriptions 522	
	Criterion-Oriented Scales 525	
	Tests Derived from Theory 525	
	Emerging Trends 526	
	Description of MMPI 527	
	Scoring Procedures 528	
	Interpretation of Profiles 533	
	Validity of Inventories for Decisions About Abnormality 538	
	Screening of Deviant Personalities 538	
	Classification of Patients 544	
	Validity of Decisions About Normal Subjects 547	
	Prediction of Vocational Criteria 547	
	Prediction of Academic Criteria 549	
	Validity of Inventories for Trait Description 550	
	The Score Profile as a Mirror 550	
	Descriptions in Aid of Institutional Decisions 553	
	Representative Personality Inventories 556	
	Structure of the Individual Personality 560	
	Criticisms of the Concept of "Trait" 560	
	A Semantic Differential Case Study 565	
	Traits and States 568	

xiv

17.	Judgments and Systematic Observations Ratings by Supervisors and Professional Observers 571  Sources of Error 571  Number of Dimensions To Be Considered 574  Improvement of Ratings 577 Reports of Participants 589  Peer Ratings 589  Measures of Environment 594 Ratings as Data on Rater Personality 598 Observation of Behavior Samples 599	571
	Problems of Sampling and Consistency of Behavior 600 Observer Error and Its Reduction 602	
18.	Performance Tests of Personality Character 614  The Character Education Inquiry 614  Moral-Conflict Problems 616 Problems of Design and Validity 618  Consistency over Forms and Trials 619  Generalization Over Tasks 619  Control for Ability and Other Competing Constructs 622 Perception 623  Psychophysiological Measures 623  Structured Tests of Perceptual Ability 625  Complex Clinical Tests 631 Styles in Problem Solving 638  Rigidity 640  Observations of Process 642  The In-Basket "Situational" Test 644  Summary Comments on Perceptual and Problem-Solving Tests 645	608
	Styles in Work Groups 646 Group Discussion 646 Task Leadership 648 Interpersonal Relations 649 Thematic Projective Techniques 651 The Thematic Apperception Test 651 Measurement of Concern for Achievement 659	:
19.	Assessment of Personality Dynamics Validation Studies 670 Attempts to Predict Job Performance 670 Sources of Error in Assessment 679	667

Validity of Clinical Descriptions 681	
Improving Assessment 683	
Improving Test Interpretation 683	
Psychological Study of Treatment Situations 685	
The Unique Functions of Assessment Procedures	687

List of Publishers and Test Distributors	695
References and Index of Sources	697
Index	743