

# CONTENTS

## PART 1

### CONTEXT OF PSYCHOLOGICAL TESTING

#### 1. FUNCTIONS AND ORIGINS OF PSYCHOLOGICAL TESTING 3

|  |    |
|--|----|
| Current uses of psychological tests                                    | 3  |
| Early interest in classification and training of the mentally retarded | 5  |
| The first experimental psychologists                                   | 7  |
| Contributions of Francis Galton  | 8  |
| Cattell and the early "mental tests"                                   | 9  |
| Binet and the rise of intelligence tests                               | 10 |
| Group testing  | 12 |
| Aptitude testing   | 13 |
| Standardized achievement tests   | 16 |
| Measurement of personality   | 18 |
| Sources of information about tests                                     | 20 |

#### 2. NATURE AND USE OF PSYCHOLOGICAL TESTS 23

|  |    |
|--|----|
| What is a psychological test?                          | 23 |
| Reasons for controlling the use of psychological tests | 30 |
| Test administration                                    | 32 |
| Rapport  | 34 |
| Test anxiety   | 37 |
| Examiner and situational variables                     | 39 |
| Coaching, practice, and test sophistication            | 41 |

#### 3. SOCIAL AND ETHICAL IMPLICATIONS OF TESTING 45

|  |    |
|--|----|
| User qualifications                        | 45 |
| Testing instruments and procedures         | 47 |
| Protection of privacy                      | 49 |
| Confidentiality                            | 52 |
| Communicating test results                 | 56 |
| Testing and the civil rights of minorities | 57 |

## PART 2

# PRINCIPLES OF PSYCHOLOGICAL TESTING

|   |     |
|---|-----|
| 4. NORMS AND THE INTERPRETATION OF TEST SCORES                      | 67  |
| Statistical concepts     68   |     |
| Developmental norms     73  |     |
| Within-group norms     77   |     |
| Relativity of norms     88  |     |
| Computer utilization in the interpretation of test scores     94    |     |
| Criterion-referenced testing     96                                 |     |
| 5. RELIABILITY  | 103 |
| The correlation coefficient     104                                 |     |
| Types of reliability     110  |     |
| Reliability of speeded tests     122                                |     |
| Dependence of reliability coefficients on the sample tested     125 |     |
| Standard error of measurement     127                               |     |
| Reliability of criterion-referenced tests     131                   |     |
| 6. VALIDITY: BASIC CONCEPTS   | 134 |
| Content validity     134  |     |
| Criterion-related validity     140                                  |     |
| Construct validity     151  |     |
| Overview     158  |     |
| 7. VALIDITY: MEASUREMENT AND INTERPRETATION                         | 162 |
| Validity coefficient and error of estimate     163                  |     |
| Test validity and decision theory     167                           |     |
| Moderator variables     177   |     |
| Combining information from different tests     180                  |     |
| Use of tests for classification decisions     186                   |     |
| Statistical analyses of test bias     191                           |     |
| 8. ITEM ANALYSIS  | 198 |
| Item difficulty     199   |     |
| Item validity     206   |     |
| Internal consistency     215  |     |
| Item analysis of speeded tests     217                              |     |
| Cross validation     219  |     |
| Item-group interaction     222                                      |     |

## **PART 3**

### **TESTS OF GENERAL INTELLECTUAL LEVEL**

|   |            |
|---|------------|
| <b>9. INDIVIDUAL TESTS</b>                              | <b>229</b> |
| Stanford-Binet Intelligence Scale                       | 230        |
| Wechsler Adult Intelligence Scale                       | 245        |
| Wechsler Intelligence Scale for Children                | 255        |
| Wechsler Preschool and Primary Scale of Intelligence    | 260        |
| <b>10. TESTS FOR SPECIAL POPULATIONS</b>                | <b>265</b> |
| Infant and preschool testing                            | 266        |
| Testing the physically handicapped                      | 281        |
| Cross-cultural testing                                  | 287        |
| <b>11. GROUP TESTING</b>                                | <b>299</b> |
| Group tests versus individual tests                     | 299        |
| Multilevel batteries                                    | 305        |
| Tests for the college level and beyond                  | 318        |
| <b>12. PSYCHOLOGICAL ISSUES IN INTELLIGENCE TESTING</b> | <b>326</b> |
| Longitudinal studies of intelligence                    | 327        |
| Intelligence in early childhood                         | 332        |
| Problems in the testing of adult intelligence           | 337        |
| Problems in cross-cultural testing                      | 343        |
| Nature of intelligence                                  | 349        |

## **PART 4**

### **TESTS OF SEPARATE ABILITIES**

|  |            |
|--|------------|
| <b>13. MEASURING MULTIPLE APTITUDES</b>  | <b>361</b> |
| Factor analysis                          | 362        |
| Theories of trait organization           | 369        |
| Multiple aptitude batteries              | 378        |
| Measurement of creativity                | 388        |
| <b>14. EDUCATIONAL TESTING</b>           | <b>398</b> |
| Achievement tests: their nature and uses | 398        |
| General achievement batteries            | 403        |
| Standardized tests in separate subjects  | 410        |
| Teacher-made classroom tests             | 412        |

|   |     |
|---|-----|
| Diagnostic and criterion-referenced tests | 417 |
| Specialized prognostic tests              | 423 |
| Assessment in early childhood education   | 425 |

## **15. OCCUPATIONAL TESTING** **435**

|  |     |
|--|-----|
| Validation of industrial tests                 | 435 |
| Short screening tests for industrial personnel | 439 |
| Special aptitude tests                         | 442 |
| Testing in the professions                     | 458 |

## **16. CLINICAL TESTING** **464**

|   |     |
|---|-----|
| Diagnostic use of intelligence tests              | 465 |
| Special tests for detecting cognitive dysfunction | 471 |
| Identifying specific learning disabilities        | 478 |
| Clinical judgment                                 | 482 |
| Report writing                                    | 487 |

# **PART 5**

## **PERSONALITY TESTS**

## **17. SELF-REPORT INVENTORIES** **493**

|   |     |
|---|-----|
| Content validation                      | 494 |
| Empirical criterion keying              | 496 |
| Factor analysis in test development     | 506 |
| Personality theory in test development  | 510 |
| Test-taking attitudes and response sets | 515 |
| Situational specificity                 | 521 |
| Evaluation of personality inventories   | 524 |

## **18. MEASURES OF INTERESTS, ATTITUDES, AND VALUES** **527**

|  |     |
|--|-----|
| Interest inventories                       | 528 |
| Opinion and attitude measurement           | 543 |
| Attitude scales                            | 546 |
| Assessment of values and related variables | 552 |

## **19. PROJECTIVE TECHNIQUES** **558**

|  |     |
|--|-----|
| Nature of projective techniques                    | 558 |
| Inkblot techniques                                 | 559 |
| Thematic Apperception Test and related instruments | 565 |
| Other projective techniques                        | 569 |
| Evaluation of projective techniques                | 576 |

|   | <i>Contents</i> | <i>xiii</i> |
|---|-----------------|-------------|
| 20. OTHER ASSESSMENT TECHNIQUES   |                 | 588         |
| "Objective" performance tests   | 588             |             |
| Situational tests   | 593             |             |
| Self-concepts and personal constructs                                     | 598             |             |
| Assessment techniques in behavior modification programs                   | 604             |             |
| Observer reports  | 606             |             |
| Biographical inventories  | 614             |             |
| The assessment of environments  | 616             |             |
| REFERENCES  |                 | 621         |
| APPENDIXES  |                 | 681         |
| A. Ethical Standards of Psychologists                                     |                 | 682         |
| B. Guidelines on Employee Selection Procedures (EEOC)                     |                 | 691         |
| Guidelines for Reporting Criterion-Related and<br>Content Validity (OFCC) |                 | 699         |
| C. A Suggested Outline for Test Evaluation                                |                 | 705         |
| D. Test Publishers  |                 | 707         |
| E. Classified List of Representative Tests                                |                 | 708         |
| <i>Author Index</i>   |                 | 723         |
| <i>Subject Index</i>  |                 | 737         |