

Preface     vii

## **Part I   Theory     1**

---

### **Section 1   Some History     3**

**Chapter 1   Making the Myth of Mental Measurement     5**

    The Quantitative Imperative     5

    History of the Concept of Measurement     9

### **Section 2   And Philosophy     21**

**Chapter 2   The Theory of Measurement in Psychology     23**

    Operationalism     24

    The Representational Theory of Measurement     28

    The Problem of Permissible Statistics     40

    A Critique of Representationalism     46

## **Chapter 3 What Quantity and Measurement Really Are 51**

Quantity	51
Continuous Quantity	56
Continuous Quantities and Real Numbers	57
Measurement	63

## **Chapter 4 Searching for Quantity 67**

Extensive Measurement	68
Conjoint Measurement	68
Double Cancellation	70
Solvability	73
The Archimedean Condition	73
Conjoint Noninteractive Quantitative Structures	77
Quantification by Conjoint Measurement	79
The Generality of Conjoint Measurement	85
Conclusion	86

## **Part II Applications 89**

---

### **Chapter 5 Thurstone's Theory of Comparative Judgment 91**

The Method of Pair Comparisons	91
An Outline of Thurstone's Theory	93
Thurstone's Theory and Conjoint Measurement	97
An Example of Conjoint Measurement	100

### **Chapter 6 The Theory of Multidimensional Scaling 112**

The Theory of Ordinal Multidimensional Scaling	112
The Application of Conjoint Measurement	120
An Example of Conjoint Measurement	124

### **Chapter 7 Coombs' Theory of Unfolding 129**

An Outline of the Theory	130
The Application of Conjoint Measurement	133
An Example of Conjoint Measurement	140

**Chapter 8 Prospects for the Development of Psychological  
Measurement 149**

The Need for Stimulus Control	149
Extending Applications of Conjoint Measurement	152
Extending the Theory of Conjoint Measurement	156
Deepening the Understanding of Quantity	157
Conclusion	164

**Appendix 1 The Theory of Order 165**

The Concept of Order	165
A Psychological Example of Ordinal Structure	170

**References 177**

**Author Index 183**

**Subject index 187**