
Contents

Chapter 1 The History and Understanding of the Concept of Temperament	1
Temperament from a Historical Perspective.....	1
The Speculative Approach to Temperament	2
The First Empirical Studies on Temperament	8
The Constitutional Typologies of Temperament.....	19
The Concept of Temperament.....	28
The Emotion-Oriented Understanding of Temperament	28
Temperament Understood as a Style of Behavior	31
Biology-Oriented Definitions of Temperament	32
Concluding Remarks Regarding the Understanding of Temperament...	35
Temperament and Personality.....	38
Temperament as a Component of Personality or as a Concept	
Synonymous with Personality.....	39
Aspects in Which Temperament and Non-Trait-Oriented Personality	
Concepts Differ.....	44
Temperament and the Big Five Factors of Personality	49
Chapter 2 The Initiators of Contemporary Research on Temperament	59
Introduction.....	60
Eysenck's Biological Theory of PEN	62
Roots of the PEN Theory	62

The Dimensions and Structure of Temperament	63
The Biological Background of PEN	66
Assessment Procedures Used for Diagnosing PEN	69
The Eysenckian Superfactors in Relation to Performance and Social Behavior	70
Critical Remarks	75
The Neo-Pavlovian Typology: Teplov and His School	77
Roots of Teplov's Approach to Studies on Nervous System Properties in Man	78
The Concept of Temperament and Its Postulated Structure	79
Studies on Properties of the Central Nervous System	80
Methods Used for Assessing the CNS Properties	84
Properties of CNS in Relation to Behavior	88
Critical Remarks	89
The Interactional Theory of Temperament Developed by Thomas and Chess	90
Roots of the Interactional Theory of Temperament	90
The NYLS as Source and Evidence for the Interactional Theory of Temperament	91
Temperament Measures Applied by Thomas and Chess	95
Temperament and Behavior Disorders	95
Critical Remarks	98
Chapter 3 Current Theories of Temperament	101
Child-Oriented Theories of Temperament	103
Buss and Plomin's Behavior-Genetic Theory of Temperament	104
The Developmental Model of Temperament: Rothbart and Derryberry	111
The Emotion-Centered Theory of Temperament Developed by Goldsmith and Campos	119
Kagan's Inhibited and Uninhibited Temperaments	124
Adult-Oriented Theories of Temperament	129
Mehrabian's PAD (Pleasure-Arousal-Dominance) Temperament Model	131
The Neuropsychological Model of Temperament Developed by Gray . . .	139
The Biological Theory of Sensation Seeking Developed by Zuckerman	146
Rusalov's Theory of Temperament Based on a Functional Systems Approach	156
Strelau's Regulative Theory of Temperament	162

Chapter 4 Physiological and Biochemical Correlates of Temperament	171
Introduction	171
The Structure, Physiology, and Biochemistry of the Nervous System as Related to Temperament Characteristics	175
The Neuron	176
The Autonomic Nervous System	181
The Central Nervous System	183
Final Remarks	189
Psychophysiological Correlates of Temperament	189
Physiological Correlates of Temperament Referring to Autonomic Arousal	191
Physiological Correlates of Temperament Referring to Cortical Arousal	203
Biochemical Correlates of Temperament	223
Cortisol: The Hormone That Gained Highest Popularity in Temperament Studies	224
Temperament–Neurotransmitter Relationship	227
General Remarks	233
Chapter 5 Behavior-Genetic Research on Temperament	237
Theoretical Issues of Behavior Genetics as Related to Temperament Research in Humans	238
Heritability as a Measure of the Contribution of Genetic Factors to Individual Differences in Behavior Characteristics	239
Basic Behavior-Genetic Methods Used in Temperament Studies	242
Relationships between Genes and Environment and the Genetic Regulation of Development	245
Behavior-Genetic Studies on Temperament: Selected Empirical Data	248
Studies on Animals as the First Step in Searching for the Genetic Determination of Individual Differences in Temperament	248
Extraversion and Neuroticism: The Two Temperament Traits Most Often Explored in Behavior-Genetic Studies	249
Heritability of Selected Temperament Traits	253
Developmental Changes in the Contribution of Genes and Environment to Individual Differences in Temperament	262
From Quantitative Genetics to Molecular Genetics	268
Final Remarks	269

Chapter 6 Assessment of Temperament: Diagnosis and Methodological Issues	273
Methods of Temperament Assessment	274
Assessment of Temperament Based on Observational Data	274
Psychophysical and Psychophysiological Indicators of Temperament Characteristics	281
Interview as a Source of Information Regarding Temperament	284
Temperament Questionnaires	286
Questionnaire Approach to the Study of Temperament in Infants and Children	287
Temperament Questionnaires for Adolescents and Adults	297
Strategies for Constructing Temperament Inventories, and Traits Measured by These Instruments	305
Selected Issues Related to Temperament Assessment	314
The Manifold Approach to Temperament Assessment	315
Construct Validity of Temperament Inventories Based on Psychophysiological and Psychophysical Measures	320
Temperament Assessment from a Cross-Cultural Perspective	327
Chapter 7 The Functional Significance of Temperament	335
The Contribution of Temperament to Child Behavior and Adjustment in Adverse Situations	336
The Concept of Difficult Temperament	336
Temperament and Goodness of Fit	340
Difficult Temperament and Psychiatric Disorders	343
Difficult Temperament and Adjustment	345
Difficult Temperament in Clinical Samples	351
Temperament and Schooling	353
Temperament as a Moderator of Stress Phenomena	361
The Understanding of Stress Phenomena	362
Temperament and Stress: Hypothesized Relationships and Empirical Findings	365
Temperament as a Moderator of Stress Consequences: The Temperament Risk Factor	376
Final Remarks	387
Appendix	391
References	395
Index	453