Music, Thought, and Feeling

Understanding the Psychology of Music

William Forde Thompson Macquarie University

New York Oxford OXFORD UNIVERSITY PRESS

Technische Universität Darmstadt Fachbereich 03 Institut für Psychologie **Bibliothek** Alexanderstrasse 10; 64283 Darmstadt

Inv. Nr. ..

Contents

		Preface vii
CHAPTER	1	Introduction 1
		Learning Outcomes 1
		Overview of Book Contents 2
		Abiding Controversies 8
		Recent Areas of Research Growth 15
		Additional Readings 17
CHAPTER	2	Origins of Music 19
		Learning Outcomes 19
		Prehistoric Music 20
		Adaptationist Accounts 21
		Theories Based on Reproductive Benefits 23
		Theories Based on Survival Benefits 25
		Nonadaptationist Accounts 32
		Precursors to Music 36
		Additional Readings 41
CHAPTER	3	Musical Building Blocks 43
		Learning Outcomes 43
		The Elements of Sound 44
		Periodic Motion 46
		The Discovery of Music Within Sound 47
		Sensory Consonance and Dissonance 48
		Tuning Systems 51
		Sensitivity to Pitch 52
		Models of Pitch Perception 53
		Absolute Pitch 57
		Timbre 59

Reconstructing Music 65 Additional Readings 66

CHAPTER 4 Music Acquisition

Learning Outcomes 67 Musical Infants 68 Music in the Womb 70 Investigating Music Perception Among Infants 71 Melodic Contour 74 Consonance and Dissonance 75 **Pitch Relations** 78 Scale Structure 81 Phrase Structure 83 84 Harmony Key 85 Rhythm 87 Memory for Music 88 Learning and Enculturation 89 Additional Readings 90

67

CHAPTER

5. Perceiving Music Structure 91

LEARNING OUTCOMES 91 Arrangements of Sounds 92 Relative Pitch - 93 Melodic Contour 95 Scale Structure - 98 Large-Scale Structure 99 Melodic Expectancies 100 Implicit Memory for Music 102 Implied Harmony 105 Musical Key 107 Implied Key 111

٦

v

Rhythm 112 Additional Readings

.

118

CHAPTER	6	Music and Emotion 119
		Learning Outcomes 119
		Emotion Work 120
		Emotion and Cognition 121
		Theories of Music and Emotion 125
		Empirical Studies 138
		Do Listeners Agree on the Emotional Meaning of Music? 138
		How Do Listeners Respond Emotionally to Music? 141
		Compositional and Expressive Signals of Emotion 144
		What Properties of Music Lead to an Emotional Response? 146
		Is There a Universal Link Between Music and Emotion? 148
		Sources of Emotion in Music 149
		Additional Readings 150
CHAPTER	7	Music and the Brain 151
		Learning Outcomes 151
		What's in a Brain? 152
		The Search for Music Inside the Brain 155
		Neurological Disorders 158
		Techniques of Neuroimaging 165
		Neuroimaging and Music 169
		A Rapidly Evolving Field 179
		Additional Readings 181
CHAPTER	8	Performing Music 183
		Learning Outcomes 183
		Playing Music 184
		Acquiring Performance Skill 186
		Communicating Musical Structure 188
		Communicating Emotional Meaning 193

vi Contents	
	Singing 195
	Improvising 198
	Gestures and Facial Expressions 200
	Evaluating Performance 203
	The Craft of the Performer 206
	Additional Readings 208
CHAPTER 9	Composing Music 209
	Learning Outcomes 209
	The Radius of Creativity 210
	Composers and Listeners 213
	Cognitive Constraints on Composition 215
	Composing with Multiple Voices 219
	Where Do New Ideas Come From? 224
	The Craft of Music Composition 231
	Additional Readings 232
CHAPTER 10	Music and Other Abilities 233
	Learning Outcomes 233
	Is Music Unique? 234
	Short-Term Effects of Music 236
a t	Long-Term Benefits of Music 241
	Educational Implications 257
	Additional Readings 257
	Glossary 259
	References 281
	Author Index 301
	Subject Index 306

.