

**PSYCHOLOGICAL FOUNDATIONS
OF MUSICAL BEHAVIOR**

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Fifth Edition

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By

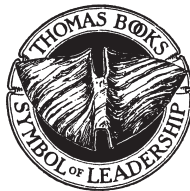
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CHARLES C THOMAS • PUBLISHER, LTD.
Springfield • Illinois • U.S.A.

Published and Distributed Throughout the World by

CHARLES C THOMAS • PUBLISHER, LTD.
2600 South First Street
Springfield, Illinois 62704

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ISBN 978-0-398-08803-3 (hard)
ISBN 978-0-398-08804-0 (paper)
ISBN 978-0-398-08805-7 (ebook)

Library of Congress Catalog Card Number: 2012006890

First Edition, 1979
Second Edition, 1988
Third Edition, 1997
Fourth Edition, 2003
Fifth Edition, 2012

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Printed in the United States of America
MM-R-3

Library of Congress Cataloging-in-Publication Data

Radocy, Rudolf E.
Psychological foundations of musical behavior / By Rudolf E.
Radocy and J. David Boyle. -- Fifth edition.
pages cm
Includes bibliographical references and index.
ISBN 978-0-398-08803-3 (hard) – ISBN 978-0-398-08804-0 (pbk.) –
ISBN 978-0-398-08805-7 (ebook)
1. Music—Psychological aspects I. Boyle, J. David. II. Title.

ML3830.R15 2012
781.1'1—dc23

2012006890

PREFACE TO THE FIFTH EDITION

The fifth edition of *Psychological Foundations of Musical Behavior*, as did the fourth, appears at a time of continuing worldwide anxiety and turmoil. The early twenty-first century is marked by acts of terrorism and war, cases of starvation and pestilence, financial chaos, violent backlash against authoritarian governments, actual and potential climate changes, and concern over how to care for an ever-expanding population with limited resources. Many resulting problems defy solution. Rapidly developing events elicit extensive commentary via social media, commentary that likely represents hasty thought, often without rational basis.

The twenty-first century also includes positive developments. Rapid international communication, impetuous though it may be, enables almost instantaneous attention to any part of the world. Evolving understanding of the human genome promises control and alleviation of genetic misfortunes. Diseases and physical challenges that once were almost a death sentence on diagnosis are becoming amenable to various pharmacological, surgical, and therapeutic interventions.

As in earlier times of worldwide turmoil and opportunity, humans may express, challenge, enhance, and/or negate surrounding conditions through the organization of sound and silence: *music*. Musical styles change, music's functions do not. A pleasant diversion, a profound aesthetic experience, a symbolization of a nationalistic or religious ideal, a personal journey through time, a sales tool—all are roles that music may fulfill.

We have learned a lot about human musical behavior. We have some understanding of how music can meet diverse human needs. Many individuals—psychologists, educators, therapists, music theorists, composers, performers, and others—have contributed to a vast array of knowledge, loosely organized into a psychology of music or, perhaps more accurately, a psychology of musical *behavior*. The knowledge embodied in that psychology of musical behavior may help enhance individuals' musical abilities, sensitivities, and enjoyment.

Thus, a renewed comprehensive examination and reexamination of the psychology of musical behavior seems especially appropriate. Understand-

ing music cognition, representation of musical structures, and the traditional areas of psychoacoustics, music learning, cultural organization of musical patterns, measurement and prediction of musical ability, the affective response to music, and musical preference all merit renewed attention.

Much remains to be learned about human musical behavior. While this edition draws on published findings appearing since the fourth edition (2003) and reinterprets some older findings, it is far from any final “truth” regarding how people create, perceive, organize, and employ musical sounds. Inevitably, new research will appear, and new questions will arise. Given the contemporary tendency to publicize research results with only partial understanding, some individuals will make premature conclusions regarding music’s roles in people’s lives and how people process music. Further research and writing will be necessary to mitigate those conclusions.

As with all original textbooks and revisions thereof, constraints of time, space, and resources necessarily limited this edition’s scope and breadth. The authors have exercised their professional judgments, based on teaching courses and conducting research and other scholarly inquiry, regarding content. Naturally, some arbitrary decisions were necessary, and the book reflects the authors’ scholarly biases.

Recent years have seen the appearance of various texts addressing specialized areas within music psychology, often written from cognitive and neuroscientific perspectives. This represents an increasing diversification within the field. As with prior editions, the authors continue a “one-volume” coverage of a broad array of topics guided by the three “criterion cs”: The text should be *comprehensive* in its coverage of diverse areas comprising music psychology, *comprehensible* to the reader who is literate in English (or the language into which the text is translated) and possesses some background in music and psychology, and *contemporary* in its inclusion of information gathered in recent years.

Again, while the world is everchanging, and music and music’s uses change with it, the *presence* of music is unchanging. The authors offer their latest review of aspects of human musical behavior with profound recognition of music’s enduring values.

R.E.R.
J.D.B.

ACKNOWLEDGMENTS

Many individuals contributed to the successful completion of this fifth edition. These include numerous former students at the University of Kansas, the Pennsylvania State University, and the University of Miami, as well as students elsewhere using prior English, Japanese, and Korean editions. The authors are indebted to numerous former professional colleagues. Dr. Wanda Lathom-Radocy's help regarding music therapy and changing attitudes regarding disabilities is acknowledged. While the authors have relied on knowledge and contacts made during many years of their university careers, they also have gained some perspective as they reflect on their past careers while pursuing active retirements. Finally, the authors are grateful to their loving wives, Dr. Wanda B. Lathom-Radocy and Dr. A. Arlene Boyle, for their continued loving support and encouragement.

R.E.R.
J.D.B.

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Chapter 1

INTRODUCTION

Purpose

This book reviews human musical behavior comprehensively, largely from a psychological perspective. Music has been a vital component of human culture since before recorded history. Human organization of sound for functional and aesthetic purposes raises many fascinating, although occasionally unanswerable, questions. Description, prediction, and explanation of musical composition, performance, and listening behaviors are continuous challenges. In recent years, claims regarding music's purported therapeutic, commercial, and educational benefits have increased, thanks in part to hasty interpretations of incomplete data. This book focuses questions and general interest on describing, predicting, and explaining human musical behavior and seeks to promote a healthy skepticism regarding premature conclusions about music's influences. Psychologists, musicians, educators, therapists, business people, and anyone with a serious interest in music's power may find it beneficial.

Understanding human musical behavior is useful for the performing musician, whether in the studio, on stage, in the classroom, or in a commercial setting. Why do people prefer certain sounds over others? How relevant is precise pitch discrimination? What psychoacoustical processes underlie musical perception? What cognitive processes turn a stream of perceived sonic events into music? Are some individuals naturally "musical" or "unmusical"? Why is a deviation from stereotyped performance practice a "stroke of creative genius" when done by a well-known conductor but "failure to understand the style" when done by an amateur? Does the master performer differ in some fundamental way from the struggling student, or is it just a matter of more practice? Knowledge of human musical behavior in diverse manifestations and situations is essential for addressing these and other numerous questions.

The person who wishes to sell products or services or enhance entertainment needs to consider various uses of music. Can business employ music

in successful marketing strategies? Can impulsive shoppers be encouraged to linger longer and spend more as a function of musical background? Is the music essential to an unfolding narrative?

Music's therapeutic functions are well documented, but therapy is not a cure. In what settings is music useful as an aid in healing? Are there instances where music may be harmful? Are there physiological changes underlying the behavioral changes noted with musical experience? The growth of the music therapy profession owes much to evolving understanding of human musical behavior, and researchers investigating musical phenomena owe much to music therapists' documentation of their experiences.

In a time of constant questioning of music's place in schools amid demands for "accountability" and stress on test scores in reading, mathematics, and other "academic" areas, music educators and advocates for arts education may find utility in developing understanding of and familiarity with human musical behavior. Do students who excel in music necessarily excel elsewhere in the academic setting? Does music really motivate and/or sedate students? Why are children more receptive to "different" music in the primary grades than in later years? Does musical ability relate to intellectual or manual abilities? Again, although this book cannot promise definitive answers, the information provided may focus relevant inquiry.

Scope

Music psychology's traditional domains include psychoacoustics, measurement and prediction of musical ability, functional music, cultural organization of musical patterns, music learning, and the affective response to music. Music cognition, broadly defined, has become an evermore prominent domain during the past 35 years or so. Music's catalytic uses in business, educational, and therapeutic settings, while clearly within the traditional domain of functional music, arguably comprise emerging contemporary domains. The chapter organization recognizes the traditional and more contemporary domains, with special emphases on psychoacoustics, musical preference, learning, and the psychological foundations of rhythm, melody, and harmony. The chapter on music as a phenomenon of people, society, and culture reflects contemporary interest in music's various roles as a catalyst for social behavior and its diverse sociocultural functions. While music psychology once gave less attention to performance and creative activity than to listening and associated behaviors, performance, composition, and improvisation now receive special attention.

Musical behavior is but one aspect of *human* behavior. Consequently, musical behavior must be subject to whatever genetic and environmental factors influence all human behavior. Throughout, the book expresses a con-

cern for what people *do* with musical stimuli and what musical stimuli do to them, in natural as well as laboratory settings.

Behavior, as used herein, means the observable activities of living dynamic human beings. Such activities are of interest either in themselves or as external evidence of some internal state. *Cognition*, the internal processes of assimilating, organizing, remembering, and recalling information (or “thinking”), may be a covert behavior, but the only way to study covert behavior with relative objectivity is to study its overt manifestations, whether by externally observing behavior or monitoring internal physical processes. *Perception* is a process of sensing the environment; obviously, it is essential for much behavior. Perception may be studied only through evidence of its results. Musical behavior includes performance, listening, and creative activity involved in composition and improvisation. The study of musical behavior necessarily includes related cognitive and perceptual processes. That which people *do* with music is musical *behavior*. So, too, is that which music *does* to people.

As Gaston (1968, p. 7) indicates, musical behavior is studied through psychology, anthropology, and sociology. This book primarily reflects a psychological approach: Psychology is the study of human behavior. Nevertheless, looking beyond the general body of psychological literature, the authors have drawn material from the germane areas of sociology, anthropology, philosophy, music history, acoustics, and business.

Preview

As with the four prior editions, the authors have considered the dynamic (in the sense of moving and everchanging) aspects of music performance and listening as well as important influences of prior experiences on present behaviors. No human musical activity results solely from willful interaction with music. Cultural influences, learning, and biological constraints are as crucial as motivation, reward, and any “inherent” properties of the musical stimulus. Gaston’s (1957) statement, from over a half century ago, remains significant:

To each musical experience is brought the sum of an individual’s attitudes, beliefs, prejudices, conditionings in terms of time and place in which he lived. To each response, also, he brings his own physiological needs, unique neurological and endocrinological systems with their distinctive attributes. He brings, in all of this, his total entity as a unique individual. (p. 25)¹

1. This is a direct quote of material written at a time when generic use of masculine terms in reference to unspecified individuals or humanity in its entirety was customary. In their original writing, the present authors have avoided exclusive reference to one gender when they discuss unspecified individuals or humanity in general.

Chapter 2 examines diverse views of why people have music and considers music's functions for individuals, its social values, and its importance as a cultural phenomenon. While the focus is largely on Western music, certain ethnological research suggests that commonalities of musical function exist across different cultures.

Much of the world's music exists primarily to further some nonmusical or extramusical purpose, such as selling something, sedating or stimulating people, enhancing a story through film or television, or facilitating and enriching ceremonies and rituals. Chapter 3 discusses such "functional music." It also provides a basic discussion of music as a therapeutic tool.

Music would not exist if people were unable to perceive and process certain psychoacoustical phenomena, such as pitch, loudness, and timbre. Accordingly, Chapter 4 discusses basic descriptions and relationships involving psychoacoustical phenomena and gives considerable attention to perception, judgment, and measurement, as well as physical and psychophysical events.

Music is a time-based art form; some organization of the durations of sounds and silences is necessary in all music. Chapter 5 discusses rhythmic behaviors and what is involved in producing and responding to rhythms. The authors believe that rhythmic response is learned; no person "has rhythm" on an absolute inherent basis.

Definitions and opinions regarding melody and harmony differ; whether those properties exist in all music is debatable. Nevertheless, they are vital considerations of much Western music, and musicians and nonmusicians use the terms freely. Research in cognitive psychology suggests that the mental organization of music depends, in part, on structural aspects involving melody and harmony. Chapter 6 considers horizontal and vertical pitch organization, tonality, scales, and value judgments, as well as related pedagogical issues.

Chapter 7 examines basic aspects of musical performance, improvisation, and composition. It considers characteristics of the expert performer, performance anxiety, creative and *re*creative aspects of making new music, and related philosophical and pedagogical issues.

Chapter 8 is concerned with the "chills up the spine" effect and other indications of an affective response to music. Physiological changes may occur in experiencing music, but what is their nature? Are these affective? What is the influence of training and experience? What makes "beautiful" music "beautiful"? The chapter discusses several approaches to studying the affective response to music, with particular emphasis on developments in psychological aesthetics.