the safety of the cradle invariably gives way to the disfunctions, disorders, and disappointments of *real life*. Weiss opines:

> One need only think of the drone hum of highways in the distance or the white flashing of radio tower lights that, uniform like the time signature of late capitalism, tick their silent tock before mountainous horizons….[T]oday, after Auschwitz, this hum, which accompanies every child as they fall asleep on automobile and high-speed rail travel to faraway lands, echoes the horror and unrest of airplane bombardment, not the tender caress and rhythm of horse-drawn carriage, which was, to be sure, the basis of the music from Brahms's era. Will this drone, and this static, electrical surge, be rescued one day as their acoustic similarity to the calm, undulating ocean is finally, in peace, recognized? (9-10).

As denizens of a "universal diaspora" (xiii), where paradise and innocence are forever lost, if they ever existed at all, "advanced music" should, in Weiss's view, take its lead from the sorrow songs of bluesmen and blueswomen, whose unpolished, note-bending aesthetic voices the "hopeless clinging to hope" (55). Our messy age of technology, displacement, and hyper-capitalism—an age that is simultaneously post-genocide, witness to genocide, and always anticipating genocide—finds its musical analog in a dignified dissonance that accepts dialectical tensions between noise and sound, the wanted and the unwanted. As Weiss paraphrases Adorno, "Dissonance is the truth of harmony" (27).

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MUSIC AND MENTAL IMAGERY. By Mats B. Küssner, Liila Taruffi, & Georgia A. Floridou (Eds.). UK: Routledge, 2023. 293 pp.

Mental imagery, or the representation of sensory information without a direct external stimulus, is among the universal phenomena associated with music. Not only can we "hear" music without corresponding external sounds, but we can mentally create simple or even complex music in our heads, sometimes in varied timbres and orchestrations. Music can also conjure abstract or concrete images, distinct memories or unfolding narratives, a sense of movement or gestures, and signal other senses, such as smells or tactile textures. *Music and Mental Imagery*, edited by Mats B. Küssner, Liila Taruffi, and Georgia A. Floridou, offers a comprehensive anthology of current research into this ubiquitous occurrence. A project of the Society for Education, Music, and Psychology Research

(Sempre), the book's twenty-four empirical studies, divided into five sections, go a long way in demystifying this phenomenon, while also proposing practical applications and pointing out where more research is still needed.

The five chapters in Part I give an overview of common types of modalities of mental imagery: auditory, visual, and kinaesthetic. Georgia A. Floridou (University of Sheffield) reminds us that a "large part of our everyday sensory experience is auditory" (21). She maps out musical imagery that occurs before, during, and after music: voluntary musical imagery of mental rehearsal, anticipatory imagery while listening to music, and involuntary imagery of "mind-pops" (single occurrences of tunes in one's head) and "earworms" (catchy tunes looping over and over in the mind). Lilla Taruffi (Durham University) and Mats B. Küssner (Humboldt-Universität zu Berlin) focus on the individualized nature of visual mental imagery (VMI) in different musical contexts, from music therapy to shamanic rituals. Despite recent advances, the authors acknowledge that the underlying mechanisms of these responses remain uncertain: "to unlock the full potential of music-related VMI in clinical and other applied contexts, a deeper understanding of the causal relationship among VMI, music, and emotion is yet to be achieved" (38). Rolf Inge Godøy (University of Oslo) looks at connections between actions and sounds, arguing that a listener's musical imagery is closely linked to their motor system. In this motormimetic view of music perception and imagery, "all sound events" and "all sound features" are found on the "body motion trajectory," such that "there often will be some sense of effort associated with sounds" (49). Jin Hyun Kim (Humboldt-Universität zu Berlin) presents kinaesthetic musical imagery as a "(quasi-)perceptual conscious experience of dynamic self-movement" arising from "mental representations of musical dynamic properties" (54). Noting that music's dynamic properties can result in a sense of self-movement, Kim cautions against equating kinaesthetic musical imagery with the simulation of motor actions or the "imagination of (imitated) motor action, be it sound-producing and music-shaping or not" (61). Drawing from philosophy, psychology, and neuroscience, Bence Nanay (University of Antwerp and Cambridge University) discusses multimodal mental imagery, or mental imagery arising from a modality that is different from the modality in which the imagery occurs, such as a visual image triggering an auditory mental image. Observing that this response to stimuli is more normal than we might recognize, Nanay describes how a dancer's movements can lead listeners to hear altered time signatures that do not actually occur aurally—and are not perceived when the music is heard separately from the dance.

Part II, also with five chapters, evaluates ways of measuring and analyzing music-related mental imagery. Rebecca W. Gelding, Robina A. Day, and William Forde Thompson, all affiliated with Macquarie University, look at subjective and behavioral measurements of music-inspired mental imagery, such as prevalence, nature, content, quality, vividness, intensity, timing, and duration. They call for more sophisticated neuroscientific methods to ground these subjective measures, noting that "multiple tools such as questionnaires, behavioural studies, and neuroimaging studies is recommended in the exploration of both music-evoked visual imagery and auditory imagery for music" (83). Timothy L. Hubbard (Arizona State University and Grand Canyon University) surveys self-reports of mental imagery in musical contexts, laying out the advantages and disadvantages of verbal self-reporting. Particularly helpful is his observation that questionnaires typically do not account for fleeting visual imagery, the blurring of imagery and non-imagery information, and the tendency of respondents to report their interpretation of visual imagery, rather than the imagery itself. Despite this need for improvement, Hubbard contends that self-reports play a key role in understanding music-related mental imagery. Taking a neuroscientific approach, Amy M. Belfi (Missouri University of Science and Technology) offers guidance in choosing appropriate methods for identifying neural correlates of music-related mental imagery. She details four tools in particular—neuropsychology, functional magnetic resonance imaging (fMRI), electroencephalography (EEG), and magnetoencephalography—noting that these "neuroscience approaches are likely of little value to the study of music and mental imagery without accompanying behavioural and/or self-report measures" (109). André Ofner and Sebastian Stober of Otto-von-Guericke University

examine neuroimaging data and machine learning techniques to analyze fMRI and EEG data recorded during music listening. They explain that machine learning algorithms can be used to identify patterns in raw data, make predictions, and reveal information invisible to the naked eye. Cognitive ethnomusicologist George Athanasopoulos reflects on his own research in Japan, Papua New Guinea, and Pakistan, bringing to light ethical and methodological challenges in cross-cultural studies of music-related mental imagery. In order to check biases and bypass Western assumptions, such research must be interdisciplinary, incorporating "concepts, approaches, and methods from anthropology, psychology, sociology, and ethnomusicology" (130).

Part III has seven chapters exploring music-provoked imagery-based states of consciousness. Kelly Jakubowski (Durham University) examines music-stimulated autobiographical memories, which can be more intense than memories evoked by other cues, such as photographs. Jakubowski attributes the vividness of memories stirred by music to "the remarkable frequency and diversity of ways with which people engage with music, and the particular value placed on music in developing and maintaining one's personal and social identity" (144). Behavioral scientist Mahiko Konishi looks at relationships between music and mind-wandering (also called "daydreaming," "task-unrelated thought," and "stimulus-independent thought"), and specifically how music listening influences these episodes and how mind-wandering can take the form of musical imagery. Anthony Gritten (Royal Academy of Music in London) looks at distraction, a phenomenon closely related to mind-wandering. Rather than seeing disruption of the listener's focus as "failed listening," Gritten contends that distraction retains and amplifies an essential indeterminacy within the listening context. Ruth Herbert (University of Kent) covers musical daydreaming, which is usually understood to involve an inward memory or imagination and diminishing awareness of external phenomena. However, Herbert writes, "evidence from subjective reports of lived experiences of music demonstrates that sometimes attentional focus may fluctuate, inwards and outwards, or be simultaneously distributed between internal and external phenomena" (174). Mats Küssner and Konstantina Orlandatou (Hochschule für Musik und Theater Hamburg) investigate synaesthesia, a rare condition in which the stimulation of one sensory pathway leads to involuntary experiences in a second sensory pathway. They compare sound-color synaesthesia and music-induced visual mental imagery, looking at how mental imagery—a normal musical response—can be regarded as a weak form of synaesthesia. Thijs Vroegh (Max Planck Institute for Empirical Aesthetics) looks at absorption, a trance-like state of consciousness. In such a state, multiple dimensions of consciousness are intertwined, including visual imagery. Vroegh proposes a probabilistic graphical model to "study the network structure of music experience in response to a favourite, self-chosen piece of music" that induces absorption (195). Jörg Fachner (Anglia Ruskin University) explores music-evoked mental imagery during altered states of consciousness, arguing that body posture during ecstatic states downregulates the physical arousal and frees up energy for focusing on the imagery: "Whether the music is monotonous or complex to induce rich imagery depends on the setting, but the reduced amount of body movement seems to be important for free energy" (205).

The six chapters in Part IV propose practical applications of music-evoked mental imagery. Rebecca S. Schaefer (Leiden University) discusses how mental musical imagery can be used in motor rehabilitation for movement-related purposes, such as Parkinson's disease, as well as in music pedagogy for both expressiveness and memorization. Taking a practical approach, she finds similarities between the processes of mental imagery in movement recovery and music pedagogy, and advocates for protocols and teaching methods in these two contexts. Katherine K. Finch and Jonathan M. Oakman, both of the University of Waterloo, review studies of how voluntary imagery is used by musicians to manage affective-related aspects of performance, particularly in the realm of performance anxiety. For a musician preparing for a specific performance or performance-related goal, they propose a four-part mental preparation: metaphorical imagery, relaxation imagery, systematic desensitization, and imagery in mental skills training. Gestalt psychotherapist Helena Dukic looks at how mental music imagery can take the form of a narrative, or a sequence of meaningful

events involving a setup, confrontation, and resolution. According to Dukic, these impressions follow active and passive exchanges (tension and release) suggested in specific features of music. Pianist Graziana Presicce gives a summary of performers' experiences with visual imagery, offering three categories of visual imagery during music performances: spontaneous, heuristic, and strategic. She argues that these forms of imagery can enhance the expressiveness of a performance (or preparation for a performance). Anri Herbst and Silvia van Zyl, of the University of Cape Town, focus their study on four visually impaired pianists. The authors discuss how the pianists' internal experience, such as the use of metaphors and occurrences of mind-wandering, can compensate for their visual impairment, and shift attention to embodied cognition and dynamic system theories. Singer, lecturer, and conductor Mary T. Black examines how choral conductors use verbalized imagery—metaphors, similes, descriptive imagery, and other figurative language—to bring out or alter singers' vocal responses.

The book's conclusion, presented as Part V, has a single chapter by Tuomas Eerola (Durham University). He ends on an instructive note:

> The real-world applications of music and mental imagery already exist. There are applications in music therapy and education that rely on imagery as part of a therapy process…or as a part of rehearsal and performance process….One of the possible ways to feed the basic research and promote the insights from this area is to campaign for featuring this topic more prominently in the teaching of music theory, musicology, and music performance, since these are the areas with the widest reach for people who are likely to be the music professionals in the future (286).

For the reasons Eerola outlines, this book is a valuable anthology of essays that, taken together, advocate for a deeper appreciation and broader applications of music and mental imagery.

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MUSIC IN HUMAN EXPERIENCE: PERSPECTIVES ON A MUSICAL SPECIES. By Jonathan L. Friedmann (Ed.). Newcastle upon Tyne, UK: Cambridge Scholars Publishing, 2022. 345 pp.

This book consists of sixteen individual essays, each an independent argument attempting to move forward the knowledge of various fields, including anthropology, linguistics, neuroscience, history, ethnomusicology, cultural studies, and musical philosophy. Yet each chapter builds on the others in terms of a narrative stream, building arguments of the complex relationship of humans to music. The book attempts to answer questions such as "What is the relationship between speech and music, and which came first?," or "Why do all cultures have music?," or "What does music symbolize?," or "What is the different aesthetic experienced by music when performed or heard?", or "What is the purpose of music in a society?" Each writer investigates an aspect of the evolution of music along with humanity's development and attempts to understand the dynamic that gives meaning to this fact in human existence. Each chapter stands alone and can be read as an example of research in that field in its own right. Each contains significant references to the current literature in its field, along with an extensive bibliography, making them easily considered for use in teaching and learning in a college curriculum. Each chapter advances its field in interesting ways, yet some may be considered as an outlier to current thinking on those topics. Taken as a whole, this book is neither simplistic in approach nor straightforward, but rather complex. The book is not broken into subsections that acknowledge similarities between disciplines, but rather approaches the questions at hand as one of dialogue with each other as well as the current literature. It is intrinsically intersectional in its approach, and therefore to most fully comprehend the arguments, it must be apprehended as a whole — as each chapter contributes a building block in understanding the overall