

**Richard Ashley & Renee Timmers (editors), *The Routledge Companion to Music Cognition*.
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The Routledge Companion to Music Cognition, edited by Richard Ashley and Renee Timmers, aims to provide a summary of music cognition as the field stands today. It does this by compiling 43 essays by authors from around the world, each one an overview of that author's research. The result is a comprehensive guide to the field which balances the technicalities of the research with accessible language that makes this book a good fit for both those new to the field as well as academics looking for a one-stop shop to update themselves on the current research.

The book is divided into five areas: "Music from the Air to the Brain", "Hearing and Listening to Music", "Making and Using Music", "Developing Musicality", and "Musical Meanings". The first section lays the theoretical framework and gives some background on the neuroscience of music, providing the context for the rest of the essays. The middle three sections are devoted to the particulars of musical actions. The final part is a more interdisciplinary look at fundamental questions about the significance of music in daily life in both the past and present. For a taster of the types of essays included in the work, two of our favorites were "Music and Language Processing" and "Scene and Heard". The former is in Part 1 ("Music from the Air to the Brain") and is by Mireille Besson, Mylène Barbaroux, and Eva Dittinger. It examines the interplay between music training, linguistic competence, and higher cognitive functions, comparing the cascade and multi-dimensional hypotheses [1]. This comparison has important implications for how we view musical training, both as an educational tool and as a "remediation method for patients with language deficits" (p.45). "Scene and Heard", by Siu-Lan Tan, is in Part 3 ("Making and Using Music") and deals with music's influence over film perceptions and interpretations. It is one of the more interdisciplinary articles, showcasing the close relationship between music and cinema, including its ability to dramatically change interpretations of film. It also provides specific examples that readers can peruse independently if they wish to do so.

This work is a comprehensive look at practically everything you would need to know to get started in the field of music cognition. It is well organized with consistently good quality essays that the editors should be commended for bringing together into one piece. Each essay is clear with helpful figures and interesting, future-focused conclusions. The glossary is an excellent resource, providing simple and concise definitions for any term you might need to know, from culture [2] to voxel-based morphometry [3] and even bebop [4]. The book covers many different subfields within music cognition, so the most effective use in many cases would be to select specific areas of interest to read, rather than the entire work.

One major critique is that there is no introduction or conclusion to the parts, leaving the book feeling a bit disjointed. Individual essays have their own bookends, but there is nothing to tie the essays together into their designated thematic areas. It would be helpful to have a summary within each section to link the essays together rather than just the foreword. The foreword, though not as engaging as some of the essays, supplies some useful links and discussion between the various areas, but an interim summary and conclusion to integrate each section would help wrap everything up and provide some discussion of each area as a unit within the larger work.

Overall, *The Routledge Companion to Music Cognition* is a great resource for current research as well as for a glimpse into the future of music cognition. As it is a rather extensive collection of essays across many subfields, the best use of the book is probably as a reference work to seek out specific areas of interest within the larger field. The essays are all well written and gathered into appropriate sections, though those sections could use their own introductions to tie them together and make the book flow better as a complete work, rather than just a collection of research in one place. The research itself is all excellent and having it all in one place creates an incredibly useful reference text. The editors have accomplished their objective of producing a comprehensive overview of music cognition that is suitable for both novices in the field as well as seasoned researchers.

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Notes

[1] The cascade hypothesis states that music training enhances sensitivity to common aspects shared by music and language, thereby improving language processing. The multi-dimensional hypothesis suggests that music training improves cross-modal integration, higher cognitive functions, and executive functions important to language. (p.37)

[2] Culture: The practices and beliefs of a group of people, including artistic activities and products (p.538).

[3] Voxel-based morphometry: Neuroimaging analysis technique used to compare the volume of specific brain structures, and investigate the potential impact of age, environment influences, and disease (p.549).

[4] Bebop: A style of jazz characterized by a fast tempo, instrumental virtuosity, and improvisation based on the combination of harmonic structure and melody, developed in the early and mid-1940s (p.537).