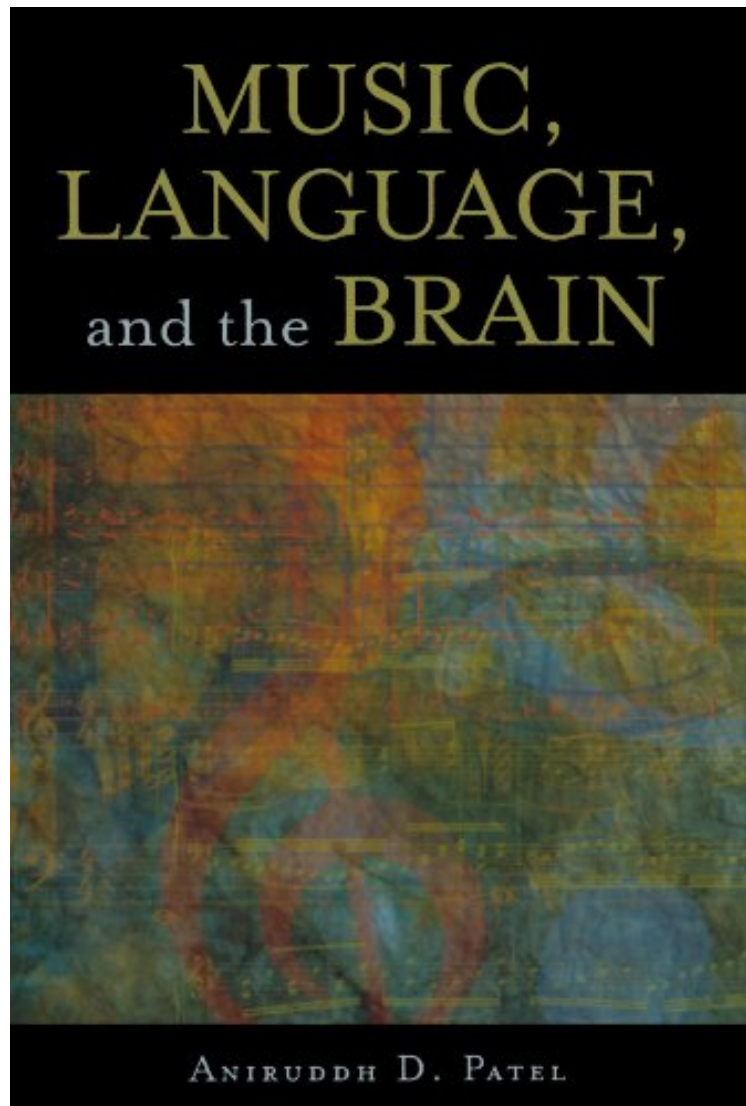


## Music, Language, and the Brain

*Aniruddh D. Patel*

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**Aniruddh D. Patel : Music, Language, and the Brain** before purchasing it in order to gage whether or not it would be worth my time, and all praised Music, Language, and the Brain:

129 of 130 people found the following review helpful. Similarities and Differences, Language and MusicBy E. N. AndersonThis is the best book so far on language, the brain, and music. It is highly technical, especially the first five chapters. Nonspecialists with a serious interest can get through the last two ("Meaning" and "Evolution") but the first five are hard going unless you are fairly advanced. Patel reviews an enormous, and almost entirely very new, literature on similarities and differences at the micro level between language and music. Overall, music is clearly related to

language in many ways, but equally clearly a separate realm--a different communicative modality. He also points out that music and its meanings are learned. We are not born knowing that minor key is "sad"; that's a recent west-European idea, unknown to the rest of the universe. We have to learn about the pastorality of Beethoven's Pastoral Symphony, and so on. On the other hand, lullabies sound like mothers shushing their babies, and I would add that laments in every culture sound like ordinary weeping. Still, most musical meanings appear to be culturally learned. This is an excellent book, and I am duly impressed with all of it, but I do have some modest points to raise. First, I would find music and language somewhat closer than he does. He rules out of consideration a number of intermediate forms--chant, rhythmic speech (like African-American sermons), incantation, word-music poetry (like Russian romantic lyrics), children's play-games, and a great deal more. It seems that a huge percentage of human communication, including much of the most important religious material in every culture, is in that neglected border zone. Something very important is here and is being missed. Second, he concludes language definitely evolved, but music is a rather recent invention--not an evolved part of communication. I am usually highly allergic to "genes as destiny," and this is surely the first time I ever argued for a genetic explanation against a learning-based one! But I can't separate music and language enough to see music as a recent invention. It depends on some of the same recursive hierarchic-nesting systems of planning as language does; it is universal among humans; it is deeply important; it seems a physical need for a lot of people. Of course I cannot be sure if this means there really is an evolved mechanism, and the question remains open. Third, he rather misses the relevance of bird song. He is aware of, but strangely downplays, recent work showing that many (most?) songbirds learn their songs and use them to recognize their mates, neighbors, local dialect sharers, and so on. Birds also use song to keep in touch with their families, show their levels of health (as pointed out by Marlene Zuk), show their reproductive status, find each other, and much else. They also use song to communicate their mood states: level of arousal, type of arousal, and more. This is important, as will appear below. Many songbirds are quite brilliant composers; mockingbirds and many others incorporate all sorts of learned noises into their songs, change the noises to fit their song patterns, work them into original phrases, and so on. Of course no bird comes close to composing even a simple song in the human sense (i.e. a single hierarchically-nested composition using phrases to carry out an overall plan). Bird song has mere "phrase structure grammar," to be technical; they don't do sentences. (No nonhuman animal is known to.) But they are doing something more than just marking territory and finding a mate. Actually, many of the best singers mate for life and don't need to find a mate in most years. Yet they and their mates often sing to each other. Also, many birds sing all year round, not just in the breeding season. We don't know what they are saying, but obviously a lot. Very simple calls do fine for territory-and-mating. Song is incredibly dangerous (hawks and cats home in on it) and expensive (it takes a lot of brain tissue, enough to be a real cost in flying). If the simple and humble songs of birds are this complex and demanding, human music must be a really major enterprise, far more important than social scientists have allowed till now. Bird songs are important because no nonhuman primates and very few other mammals are known to have complex learned songs. Bird songs are about our only models. (Whales sing too, but don't make great lab animals.) I think music evolved, and did so to handle the management, manipulation, and communication of broad, general, but intense mood-states. Language handles the specific cognitive information; music handles the powerful but unsayable moods. Partly, the moods are directly represented in the music (as in lullabies and laments); partly we learn our cultures' rules about communicating. There is a great deal more to say about this, especially when one folds religious chants into the mix. We need more dialogue and better cross-cultural and cross-species knowledge. Is there a group out there working on this? 31 of 31 people found the following review helpful. If you have to pick one book on the subject...By Christopher Lavender this is the book! Extremely well written and VERY thorough. Patel's "Music, Language, and the Brain" represents presumably most (if not all) of the data that has been found thus far at the crossroads of music, language, and cognition. It does get technical from time to time but we're dealing with a technical topic and as a musician with only cursory knowledge of linguistics and cognition I still found the technical data well presented and very understandable. There are small points here and there that I might disagree with (based on my experience as a musician) however in every case it is made clear that these points are hypotheses of the author and further research needs to be done. This book isn't for everyone but for those interested in what connections can currently be made, what connections can NOT be made and possible future research in the field of music/language cognition, this volume is complete and enjoyable! 10 of 10 people found the following review helpful. A great reference book By Customer I bought this book because I had seen it mentioned in a few other books I had read on the topic of music and the brain. Oliver Sacks and Daniel Levitin have both referenced this work at some time. I am, as a music teacher in public schools, always looking for ways to strengthen the argument for keeping music instruction alive in the public schools, and have always believed that the links between learning language and learning music might be one of the building blocks of this argument. I have only just started reading this dense volume, but it is chock full of rigorous research and is very accessible even to regular people. It has been written to be accessible either to musicians -which I am- or neurologists-which I am not, and in the reading I have done so far, this seems to be the case. It is a book also which is meant to be read over time, and not necessarily in the order as it is presented. Each of the sections can stand alone, and I have found even that I can dip into it for a particular bit of information and come away with something new to add to my understanding of how

music, language and the brain all work together.

In the first comprehensive study of the relationship between music and language from the standpoint of cognitive neuroscience, Aniruddh D. Patel challenges the widespread belief that music and language are processed independently. Since Plato's time, the relationship between music and language has attracted interest and debate from a wide range of thinkers. Recently, scientific research on this topic has been growing rapidly, as scholars from diverse disciplines, including linguistics, cognitive science, music cognition, and neuroscience are drawn to the music-language interface as one way to explore the extent to which different mental abilities are processed by separate brain mechanisms. Accordingly, the relevant data and theories have been spread across a range of disciplines. This volume provides the first synthesis, arguing that music and language share deep and critical connections, and that comparative research provides a powerful way to study the cognitive and neural mechanisms underlying these uniquely human abilities. Winner of the 2008 ASCAP Deems Taylor Award.

"A major synthesis that will be indispensable to neuroscientists, and a thought-provoking and illuminating exploration of the mental and neural foundations of music and language for anyone interested in the human brain."--Oliver Sacks  
"This book is an intellectual tour de force, raising many more issues than recent popular works...Patel offers a thorough analysis of music cognition and its relation to language, and outlines an ambitious and innovative research programme that deepens our understanding of cognition in general...A work of exceptional scholarship and clarity."--Nature  
"This book is a fabulous guide to what can sometimes be an inaccessible body of literature. Although popular books on this subject abound, Patel has provided an up-to-date and authoritative academic treatment...Music, Language, and the Brain is an impressive feat of scholarship and comes highly recommended."--Nature  
Neuroscience  
"Patel's dissection of the multiple components of language and music cognition is elegant and deeply knowledgeable. His writing achieves a masterly balance. On the one hand he is bold and creative in uncovering and explaining important phenomena that link language and music. On the other hand he displays true scientific humility in refusing to speculate too far beyond the known facts. In a subject area prone to superficiality and overstatement, Patel is a sure and trustworthy guide for how to make real progress in understanding these complex but fascinating phenomena."--John Sloboda, Professor of Psychology, Keele University  
"This book will be required reading for specialists, and interesting and informative reading for everyone. It manages to combine remarkable breadth of coverage with genuine depth of understanding, and it's clearly and elegantly written. The author has a clear point of view and wants to get it across to other researchers, but never lets that get in the way of the book's more fundamental goal of putting the latest research within the reach of the interested non-specialist reader."--D.R. Ladd, Professor of Linguistics, University of Edinburgh  
"Reading Patel's Music, Language, and the Brain is a deeply rewarding experience. The question of whether parallels exist between music and language has until now been a question of wide interest and speculation. This landmark monograph provides a detailed and informed framework for examining this question scientifically. The presentation presumes no prior specialized knowledge and offers clear explanations of the technical ideas necessary inspiring agenda for future research, ranging from intriguing speculations to carefully-worked out experimental designs. Music, Language, and the Brain will shape and inform research on the relationship between music and language for decades to come."--Carol L. Krumhansl, Prof. of Psychology, Cornell University  
"...a wide-ranging, well-researched and highly readable exploration...Patel's book is the most scholarly and comprehensive account of the topic yet published. It should be of special interest not only to music psychologists and phonologists but also to other linguists who want to expand their horizons."--Trends in Cognitive Sciences  
"Written by a first-rate scientist, Music, Language and the Brain is the most comprehensive and clear treatment of the sometimes patchwork body of knowledge exploring music and language comparisons within music psychology and neuroscience. Patel's book makes an immediate and important contribution to the vast array of literature in this area by bringing it together in a single source. It is all the more impressive because of the author's ability to present this complex web of scholarship in a very logical and highly readable style...I am certain I will find myself returning to this resource many times."--Steven M. Demorest for Empirical Musicology  
"The book is dense, but not heavy, clear but not simple, rich but not arrogant. It is the type of book that needs to be discussed with other people, to savor, sip by sip, like a 10-year old Bourgogne."--Music Perception  
"What's great about this volume is that it provides an all-in-one compendium of a huge amount of information, nicely organized, with appropriate illustrations, and lavishly referenced throughout...Overall, this is a highly recommended read. It is stimulating and wide-ranging and contains material that readers of many backgrounds and levels will find interesting."--Neuron  
"Aniruddh Patel's book, Music, Language and the Brain, manages to be both admirably readable and also scholarly. Whilst there are other books dealing rigorously with the perceptual and cognitive aspects of language and music as separate topics, few, if any, authors have successfully tackled the task of exploring the overlap between the cognitive and neural mechanisms of these two uniquely human domains. Patel takes on the challenge of providing not only accurate coverage of existing research in the fields of language and music, but also a much needed synthesis that throws new light on the links between the two....Patel's research ideas could keep a battalion of investigators busy for the next decade.... It sets a gold standard

for authors aiming to write a wide-ranging, yet not over-technical book which is comprehensible and without having sacrificed intellectual integrity in the search for glib generalizations."--Brain"A scientific tour de force.... Monumental in scope and in proportion, the value of this volume as an academic resource is immense. A vast amount of research is packed into its 513 pages and Patel demonstrates perspicacity and clarity of expression throughout... Music, Language, and the Brain makes a profound scientific contribution to the study of music and language...no other single source equips readers more thoroughly to explore the cognitive intersection between these two domains."--Psychology of Music"...Music, Language and the Brain reaches far and ranges wide, its themes and arguments irreducible to the sum of prior formulations on the "music of language" and the "language of music." Seldom does one encounter so voluminous a repertory of empirical evidence so deftly marshaled by so communicative an intellect."--Notes"....this book is an accessible and invaluable resource....In an age of lip service to interdisciplinarity, Patel rolls up his sleeves and starts building bridges, not just among the subdisciplines of cognitive science, but also between the science and humanities. I recommend this book enthusiastically as a guide to language and music in the brain and mind, and as a model of integrative thinking."-- ed by Daniel Casasanto, Max Planck Institute for Psycholinguistics, in Language and CognitionThe strength of Patel's book is its ability to provide in-depth studies of music and linguistic cognition in a manner that illustrates both their interconnectedness and their differences. Any student of music theory would benefit from Patel's explanations of mental processing of music and its theoretical foundations; any student of linguistic theory would benefit from his neurological analogies. As the study of music cognition continues to grow, the present work will become an increasingly important resource."--Music Theory Online"Music, Language, and the Brain provides a fascinating synopsis of the current, young state of scientific research in cross-domain language--music comparative study. The book traverses with ease the disciplinary lines of linguistics, music and neuroscience. This impressive work of scholarship will serve as a reference on the topics for years to come."-PhonologyAbout the AuthorAniruddh D. Patel is past president of the Society for Music Perception and Cognition and is a Professor in the Department of Psychology at Tufts University.