

The Origins of Music

*Edited by Nils L. Wallin, Björn Merker and Steven Brown, MIT Press, 2000, £39.95 (498 pages) ISBN 0-262-23206-5 (in **TRENDS in Neurosciences**, March 2001, 24 (3), p190)*

To a very large extent, research agendas within evolutionary and cognitive psychology are set by our everyday expectations. Hence, a behaviour such as language – which we expect to be humanly universal, structurally complex, and self-evidently functional – provides a rich terrain in which we can expect to find significant information about our cognitive processes and capacities and their origins, as is evident in the numerous texts of the last decade concerning language in cognition and evolution. Everyday expectations of music are likely to be somewhat lower: musicality seems the province of a talented few; music's complexity appears ephemeral and superficial; and its functionality is definitely not self-evident. But several decades of research into music cognition show unequivocally that these expectations are simply wrong. Not only does musicality appear to be universal, but the structural complexity of music in our experience rivals that of language while its functionality is multifarious. And Wallin, Merker and Brown's volume, 'The Origins of Music' goes a long way to demonstrating just how significant and informative is music for an understanding of the emergence and nature of human cognitive processes and capacities.

This book knits together contributions from ethology, anthropology, archaeology, psychology, neuroscience and philosophy to yield an overview of the complexity, diversity and centrality of music in human experience and behaviour, one that

raises significant questions about the place of music in the emergence of human mind and culture and about its importance for the contemporary encultured mind. Amongst these diverse perspectives perhaps none poses such hard problems for cognitive science as those concerning music and culture. The difficulties of characterising complex behaviours across cultures, the paucity of information about the cognitive and neural bases of those different behaviours in cultures other than our own, and the sketchiness of our very understanding of the relationships between culture and cognition, are all brought sharply into focus in this book's considerations of music and its origins.

This volume is divided into four main sections. The first, "Vocal communication in animals", concerns music's prospectively ancient provenance, largely on the basis of the structural analogies and homologies between human music and animal uses of sound. The next section, though entitled "Music, language and human evolution", concentrates mainly on the traces that music may have left in our behaviours and neurophysiologies, and in the archaeological record, as well as tracking some of the differences and similarities between the cognitive and neurophysiological substrates for language and for music. A subsequent section, "Theories of music origin", explores different possible bases for the functionality of music (here, largely social), while the concluding section, "Universals in music", discusses innate infant

musicality and reflects on music in the context of the specificities of western contemporary culture as well as within a broader framework of the general dynamics of human society.

It would be invidious to single out individual chapters for particular praise or blame, as all contribute positively to the whole, although chapters by two of the editors, Merker and Brown, by Ellen Dissanayake and by Walter Freeman, present ideas that should surely be central in the research agendas of evolutionary psychology and of cognitive science. One can certainly make criticisms of individual contributions: for example, Jerison, in his chapter on "Paleoneurology and the biology of music", never discusses the different degrees to which sensory information is differentiated in different species of mammals, (see, for example, Grossenbacher, 1993) which would impact significantly on any consideration of generalisability of sensory capacity across species; and Kunej and Turk, in their fascinating account of the Divje babe "flute", don't make clear just how extraordinary is a claim for a Neanderthal provenance for a musical artefact in the light of the present archaeological consensus on the behavioural and cognitive capacities of *Homo neanderthalensis*. However, the strengths of the book far outweigh the deficiencies of any individual contributions, strengths that lie in its diversity of perspectives and the sharp focus brought by each contributor to their own perspective.

Within the institutions of academia, music suffers from the school band syndrome; its presence tends to be acknowledged only at times of

pomp and celebration. Yet music, as this volume demonstrates, is as fruitful a ground for enquiry into the nature and evolution of the human mind as is language; it appears universal yet multifarious, complex and rooted in multiple facets of human minds and behaviours. An understanding of the emergence of human musicality appears likely to provide a window into what Plotkin (1997, p222) terms 'the most complicated thing in the universe... the collective of human brains and their psychological processes that make up human culture'. The need for such a window is increasingly evident as cognitive science comes to terms with the fact that human minds are not just human brains but the outcomes of human brains that are embodied, enhistoried, and dynamically interacting in a web of culture, one of whose principal strands is music.

References

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- Plotkin, H.** (1997) *Evolution in mind*. London: Allen Lane/The Penguin Press.