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—A review and dialogue with 30 authors

How we develop musically, and the role of education in this development is a topic of interest to every music educator. Our pedagogies and curricular choices are guided by our beliefs, our observations, our experience, and our values according to how we understand what it means to be musical, and to develop, musically. We are also guided by research, whose claims for truth are expected to be based on evidence rather than belief. Therefore, it is our responsibility to familiarize ourselves with the available body of scholarly knowledge, and to examine it critically so that our discourse and classroom applications are based on twin pillars of experience and research. *The Child as Musician: A Handbook of Musical Development*, offers a distillation of knowledge of musical development from a wide range of perspectives including cognitive, psychological, physiological, philosophical, historical, social and cultural. Thirty authors report on studies of the musical development of children. The twenty-four chapters are grouped loosely into five sections: Development, Engagement, Differences, Skills, and Contexts. For the most part, the scholarship is situated in mainstream UK, North American, Western European, and Australian musical experience. Two chapters are devoted to ethnographic studies. Issues addressed here are of interest to researchers, scholars, teacher educators and music education professionals. Readers will note that the book's editor, Gary McPherson, is listed as co-author in five of the 24 chapters.

In the first section, labeled Development, five authors report on prenatal development, infants as musical connoisseurs, the musical brain, methodological issues in cognitive musical development, and musicality. The first three chapters review research on the development of the musical brain. Richard Parncutt points out possible dangers of research on the unborn child and the potential for harm once the child is born. Sandra Trehub addresses a methodological issue that dogs researchers in the field of infant musical perception, namely how to obtain valid information that is useful. Don Hodges reviews current knowledge about the development of the 'musical' brain from before birth through the teenage years. His claims that formal music training develops different brains, and enables the detection of pitch variation in music and language warrant closer examination: it would carry more weight if the socio-cultural complexities of the development of musical perception received greater acknowledgement. The concept of the student as recipient of training implies a unidirectionality that can't be rationally supported. Readers may well ask how these perceptual abilities develop among the multitude of accomplished musicians in our midst and around the world who have had no formal training. How may their superior expertise in pitch and rhythmic detection, differentiation, manipulation and re-creation be explained? Readers might also want to ask about the role of intentionality, agency, immersion, opportunity, and social scaffolding in the development of the ability to detect pitch variation in music and language?

When a scholar of Bamberger's importance states that she needs to re-think the theoretical and methodological assumptions on which her previous research on musical development is based, we need to pay attention. In Chapter 4, "What Develops in Musical Development?" Bamberger questions assumptions of cognitive developmental theory, and its terminology, particularly terms such as "progress" and "musical development." She discusses anomalies and enigmas, which are revealed but not always addressed, in research on musical development, the preference being given, rather, to regularities identified. She examines critically assumptions around the privileged status given to symbolic notation and the role that belief in the efficacy of notation plays in attempts to understand musical development. Bamberger reminds us of the importance of subjecting to critical examination the rational basis upon which research is constructed and upon which claims for truth are made. Researchers who have been influenced by Bamberger's work will want to read this chapter carefully. It is worth pointing out that her reference list reveals influences from semiotics, social psychology, philosophy, cultural anthropology, history, and developmental psychology—particularly Vygotsky, whose work has come to assume an important role in education and other fields.

In Chapter 5, "Musicality," Susan Hallam asks what people mean when they talk about "musicality". This is a good question. Tracing the history of psychometric testing for musical 'intelligence'

and the uses of these test results as a basis for making decisions about children's music education, she explains that these performance-based activities are tests of achievement rather than tests of aptitude or potential to achieve. Furthermore, she reminds us that conceptions of knowledge are not fixed, pointing out that in some cultures, it is effort, rather than innate ability that is believed to be responsible for children's achievements. Her discussion of Gardner's failure to address "the issue of motivation and commitment to music and the relationship between these, the various intelligences and their end-states" (p. 103) reminds readers of the necessity of situating the discourse around musicality in a more conceptually inclusive framework.

In Section Two, Chapters Six through Ten, the emphasis is on student engagement with music. Does exposure to music make you smarter? Glenn Schellenberg addresses this question in chapter six, and offers an overview of the field since the Rauscher et al. study in 1993. The connection between this area of research and the musical development of children would benefit from clarification.

David Hargreaves, Adrian North and Mark Tarrant review the literature on musical preference and taste in childhood and adolescence, a topic of particular interest to educators who work with this age group. Authors clarify the difference between preference and taste, citing attitude, emotional response, opinion, behavioral intention, situational context as influential factors. Readers will find the authors' use of Social Identity Theory useful as a framework for predicting and explaining adolescents' musical behaviours. They explain the power of shared musical preferences to ensure social acceptance by the 'group.' This power is essential for music educators to understand. It also helps to explain the dilemma of the boy or girl whose musical tastes run counter to the group but who do not want to be singled out as 'different.'

In "Musical Literacy," Janet Mills and Gary McPherson address an issue that challenges teachers and students alike, namely, the importance placed on reading notation as a condition of musicianship in formal educational settings. Acknowledging that the ability to read notation is but one dimension of literacy, and that staff notation is only one type of notation, the authors set forth a set of principles, drawn from language literacy, that can act as a construct for discussing music literacy. The authors' final caveat: "reading staff notation is not a prerequisite for successful engagement with and appreciation of music..." (p. 169) is a statement that will resonate with researchers in communities of musical practice beyond the academy. The authors' six points (p. 156) that support their claim on behalf of "Cheryl's" fluent musicianship – in spite of the fact that she does not 'read' – broaden the definition of literacy to embrace multiple literacies. The authors warn that exclusive concentration on reading can both hinder the progress of learners or turn them off altogether. This discussion of the difficulties of learning to read will resonate with many educators.

I found this chapter by Mills and McPherson stimulating for a number of reasons: the issue of what constitutes musical literacy resonates with my own experience as (a) a member of a family of musicians who played instruments and sang professionally, but had no formal training; (b) as a researcher in Fiji (Russell 1997, 2001, 2002, 2003) which I describe as a "singing culture" because of the widespread ability to harmonize *ad lib*; and (c) a professor of music education working largely with "generalist" student teachers. Too many of these students believe that the descriptor 'musical' is applicable only to those who read music. I learned that it was a useful strategy for me to include the phrase "The ability to read notation is NOT a prerequisite" in calendar descriptions of my music courses. Each year some students confess that they would not have taken the course if it had not been for this phrase, which relieved their anxiety.

However, reading is a multi-layered and complex process, with cognitive, social and personal dimensions that educators deal with according to how they conceptualize reading. And so, the parallels with language reading are important to examine. The authors borrow from reading strategies in language to explain how we learn to read staff notation in music. Here, I think, is a weakness in their argument. To conceptualize reading music notation they draw on the notion of 'decoding', a process for converting symbols into sound. Decoding is a laborious process that leaves one with a series of sounds that may or may not make sense, and is a concept of reading that has been widely challenged for the past 30 years by reading and literacy researchers in the whole language movement that explains the reading process as an intentional, meaning-making activity (see, eg. the work of prominent reading researchers such as Goodman (1986, Goodman et al. 2005, Flurkey & Xu 2003), Allington (2001, Cunningham & Allington 2007), Meek (1983, 1984, 1994), and Taylor (1993) for more comprehensive—and provocative—accounts of reading). Decoding serves a limited purpose because its theoretical foundation is based on false premises. It is therefore a questionable basis on which to conceptualize reading staff notation. At the very least, the construction of models of reading notation warrants critical examination and consideration of alternative

theoretical frameworks. Using a transactional model of reading may prove useful. Carroll's (2007) research, for instance, approached the topic of notation from a social-constructivist perspective. She showed how young children used a range of personal, social and material resources to make connections between sound and symbol when given a notational task. In the process the children revealed their understandings and the cognitive and social processes of their knowledge-making.

Margaret Barrett organizes her discussion of children's development of aesthetic "identities" around three perspectives. She traces the western philosophical roots of aesthetics, provides a brief, critical overview of research in experimental and empirical psychology, and fleshes out postmodern views from sociology, examining the shaping of aesthetic response by culture and context. Feelings, emotion, and arousal are some of the slippery concepts and terms she clarifies. Readers will find this chapter, and the five pages of accompanying references an excellent resource.

Emery Schubert and Gary McPherson's ask: At what age can children perceive emotion in music? The phrasing of the question presupposes that emotion is an entity that resides in music, an assumption that should be challenged, elaborated for readers, and situated culturally – but is not. The authors examine this issue from methodological, psychological, and theoretical perspectives, and propose a theoretical position to account for the ways in which children from birth to the age of 18 "decode" emotional information from music. Here again, the usefulness of "decoding" as a conceptual and rational basis for understanding the complex interaction between the reader/listener and the (sound-)text would benefit from further analysis and elaboration. Readers wishing to explore this issue further might find it helpful to read Louise Rosenblatt's (1978/1994) *The Reader, the Text, the Poem: The Transactional Theory of the Literary Work*.

In Section Three, chapters 11 to 14, seven authors address "Differences." James Austin, James Renwick and Gary McPherson lead off with an overview of major theoretical traditions and research on developing motivation in both general education and music education. They explain that motivation is a theoretical construct that is used to account for the initiation, direction, intensity, and persistence of behaviour especially goal-directed behaviour. Discussion is organized around the five pillars of motivation theory from psychology, namely achievement, goals, conceptions of ability, ability self-perceptions, interests and values and attributional beliefs. The authors explain that "as children grow older, they become more capable of attending to, processing, understanding, and implementing information (implicit or explicit) they receive from teachers, parents, siblings, peers, and other members of the social system." Readers interested in social constructivist perspectives will challenge as insufficient the concept of children as receivers and processors of information.

In "Giftedness and Talent," Gary McPherson and Aaron Williamon distinguish between 'gifts' and 'talent' in this chapter on the nature/nurture issues that pertain to exceptional ability in music. They present a six-point framework for the discussion that includes giftedness, the developmental process, intrapersonal factors, environmental catalysts, chance, and talent. Like Hallam, and others in this book, they note the blurring of conceptual boundaries between hard work and achievement in cultures such as that of Japan. The authors validate expert knowledge by providing a scholarly, researched-based framework for supporting experienced observers' ability to identify exceptional musical giftedness.

Chapters thirteen and fourteen, written by music therapists Judith Jellison, and Leslie Bunt, will be of interest to scholars and practitioners in music therapy. Readers interested in music therapy will appreciate Bunt's review of the theoretical underpinnings of music therapy practice.

Section Four of the book deals with "Skills." In "Musical Play," Kathryn Marsh and Susan Young provide a synthesis of relevant literature on play and review the value and importance of play in general and in music education in particular. This chapter is a good resource for those interested in research on play, and is enlightening as a reading in a music teacher education program.

In "Singing and Vocal Development," Graham Welch explains that singing competence can be developed by the use of pedagogical methods that are based on understanding how the voice develops. As the chapter title suggests, the focus here is on skills development, and competence by western choral standards. The author traces development of the voice by age and by gender, emphasizing pedagogy and the accurate reproduction of pitches. Welch shares his considerable expertise in this area, in reader-accessible language. Music teachers, vocal coaches, choir leaders, music teacher educators will find this chapter useful.

Gary McPherson and Jane Davidson report on research on environmental and personal influences on children's learning of a musical instrument. Acknowledging that their research is located within Western musical traditions—which this reader appreciated—the authors describe the influences that shape children's motivations to begin learning an instrument, and their instrument choices. They discuss the

strategies required to become successful, self-regulated performers, and the type of support needed from parents.

In “The Individual and Social Worlds of Children’s Musical Creativity,” Pamela Burnard issues a challenge to conventional developmental research on creativity, observing that the existing literature has left largely unexplored the issue of whether dynamic changes in creativity arise as a consequence of personal, individual differences or, as a situated phenomenon within a “network of cultural systems” (p, 360). She argues for a shift in research focus, from an age- or phase-related view of development to an emphasis on the ‘how’, what, ‘where,’ and with ‘whom’ of musical creativity.

Peter Webster and Maud Hickey address “Computers and Technology,” asking: How might advances in music technology help us support the developmental understanding of music in children? The authors review children’s musical development in terms of perception, performance, preference and creation, and discuss how these aspects of development connect to music technology. For a provocative response to the rise to prominence of computer technology in music education, readers might enjoy reading Meki Nzewi’s (2003) article “African musicianship in the global thrust: Redemption for disorienting human pulse.”

In Section Five, “Contexts,” authors address musical development from historical, social and cultural perspectives. Gordon Cox describes children’s formal music experience in medieval and 18th century Britain, late nineteenth century Europe, and the twentieth century. Readers will find here an introduction to the ways in which children and childhood were conceptualized in these epochs, and how these views connected to children’s music learning. This chapter reveals how cultural ideas about childhood affect educational practice, and of the importance of historical knowledge to current teaching concepts and practices.

Patricia Shehan Campbell brings her considerable cultural expertise to bear in “Global Practices.” Her carefully constructed argument that the study of children’s development as musicians from cross-cultural perspectives is necessary to provide a fuller understanding of children’s interests, needs, behaviours and values is one that music educators and scholars would do well to heed. She illustrates her points with vignettes of children and youth, engaging in musical practices in Ireland, Japan, The Philippines, Thailand, societies in East and West Africa, and North American First Nations.

Robert Walker, a researcher/philosopher interested in diverse cultural traditions, explains that one of the ways in which children maintain a stable cultural identity is through the musical values and practices of the culture. He argues that children’s musical development should be concerned with the stable aspects of cultural life, the “ineradicable psychological and emotional phantasms of one’s birth culture and early experiences” (p. 440). He rejects categorically any claims that the global entertainment industry constitutes a culture in its own right – a claim that some readers will recognize as a topic of ongoing – and sometimes acrimonious - debate among music education philosophers and practitioners. Building on Geertz’s (1983) notion of art as a cultural system, and children as both shaping and being shaped by the “webs of significance” in which they are suspended, Walker explains that children’s music making both reflects and reinforces their culture, and he presents problems inherent in attempts to define development.

Walker’s strategy of comparing & contrasting contemporary Western culture with cultural groups in historical Korea, Papua-New Guinea and central Africa, which he describes as “untouched” by the global entertainment industry, works well as a framework for his critical examination of psychology-situated assumptions about, and claims on behalf of, children’s musical development. He cites especially, listening habits and active participation in community musical events, particularly with reference to inter-generational association. Using a contrast/comparison approach he challenges western assumptions that children’s musical development is a progression from the simple to the complex. He points out that children in the non-western cultures he studied are inducted early into adult musical practices. He challenges the validity of western psychology’s claims that development proceeds in “discrete stages of cognitive and affective development matched by incremental progressions from simple to complex musical activities, eventually leading to adult music” (p.458) that has held, and continues to hold, sway over much of formal educational practice.

Walker’s arguments resonate with my experience, mentioned earlier, of singing in the Fiji Islands. But it is not necessary to travel so far to find examples of intergenerational, active participation in the musical traditions of a culture. I offer the example of my two sons, choir boys in a cathedral in Montreal, singing week after week, year after year until their voices changed. Every week, they learned and performed complex service music that featured the great choral works from Palestrina and Bach, to Mozart and Haydn, to Brahms, Messaien, Britten and Fauré, in languages that included Latin, German, English and

French. This, they started at about the age of seven. They were not taught to read notation. Had the cathedral's musical director heeded contemporary pronouncements about musical development of children, and the step-by-step progressions one finds in government curriculum documents, who knows what limits might have been placed on the musical development of these boys?

Walker's chapter is a scholarly overview of current concerns in music education, especially around the issue of popular culture and the adolescent student. It is a fine resource for undergraduate or graduate students in music education as well as broader areas of education concerned with social issues. Readers interested in pursuing the ideas raised here might also find it worthwhile to read John Roh's (2003) reflections on western and traditional Korean music.

In Chapter 23, "Positive Youth Musical Engagement" Susan O'Neill discusses the diverse ways and contexts in which young people can and do engage with music, in formal and informal environments. Rejecting deficit models of music development, the author embraces instead a positive perspective on youth development, and she illustrates the value of this perspective for music education. In the 24th and final chapter, "Musician Identity Formation," Jane Davidson and Karen Burland focus on adolescents and their relationship with music, particularly, the shaping of their sense of who they are. The authors draw on life-span theory to frame their discussion of identity issues that arise during what is "perhaps the most significant and stressful of all life-span changes." The author reminds us that understanding something of the social, sexual and occupational pressures that adolescents experience is fundamental for successful teaching and learning. Readers interested in identity issues and adolescence will find useful O'Neill's review of literature – together with the references in Hargreaves, North & Tarrant—on the connections between music, musical experience, music education and the emerging adolescent identity.

This book is most useful as a resource for stimulating thinking about musical development, in terms of concept and practice. For more in-depth, critical treatment of some of the ideas expressed in these chapters readers can visit other works by the authors. The approximately 91 pages of references will also be found useful. The diversity of perspectives, claims, arguments and interests expressed here, and the issues these ideas raise, will surely provoke comment and controversy, and expand the discourse on musical development. Reading through the 24 chapters in this book reminded me of papers I want to write, ideas I want to explore, books I want to read, and conversations I want to have. I expect that readers will be similarly inspired.

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NOTE

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