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Infant Musicality

NEW RESEARCH FOR EDUCATORS AND PARENTS

JOHANNELLA TAFURI

Edited by Graham Welch and Translated by Elizabeth Hawkins

ROUTLEDGE

SEMPRE Studies in The Psychology of Music

INFANT MUSICALITY

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New Research for Educators and Parents

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To my mother
who carried me in her womb
and rocked me
while singing

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Foreword

It was the summer of 1998. Johannella and I had been invited to South Africa to participate with international colleagues in a research seminar on music education. One afternoon, we had time out from our discussions to explore the wonderful countryside that surrounded the conference centre and to visit a game reserve. Johannella and I sat next to each other on the coach and we discussed her proposed longitudinal study of infant singing development. Her plan was to begin with volunteer Italian mothers-to-be during the final stages of their pregnancy and to continue the research across succeeding years. It was (and is) a bold and visionary study; something that had not been attempted before, but essential if we were to take forward our understanding of how early singing behaviours actually develop over time from the earliest beginnings.

Previous research into singing behaviours had largely focused on studies of particular age groups at specific moments in time, with "development" having to be inferred from the juxtaposition of different sets of research data. Although it is possible to put such findings together to generate some kind of overall picture of development, this is not equivalent to a sustained investigation of a group of children over time that also takes account of the context in which their singing develops. Previously, only a few researchers had attempted longitudinal and/or comparative studies of different age groups and singing (such as Wilson, 1973; Moog, 1976; Davidson, 1994; Dowling, 1999; Welch, 2002) and none had focused on this very young age group. What Johannella proposed was of a different scale – a much larger group of participants for whom there would be regular monitoring over many years of singing in the home, recorded by the mother, and supplemented by data from weekly communal sessions in the local conservatoire. Data were to be gathered by audio (some video) and written diaries completed by the mothers.

The outcomes of Johannella's research have been as exciting and wonderful as was the original vision. For the first time, we have evidence of how individual children develop their singing behaviours from the earliest months of life onwards. And the data is both informative and surprising.

Earlier research indicated that singing development pre-school is characterized by an increasing interaction with the sounds of the experienced maternal culture. This interaction is reflected in a mosaic of different singing behaviours that are evidenced between the ages of one and five years. It is the young child's nature to have an acquisitive, playful, creative and spontaneous engagement with their "local" musical world. According to this previous research, the variety of vocalization includes two-year-olds' repetition of brief phrases with identifiable rhythmic and melodic contour patterns (Dowling, 1999) and three-year-olds' vocal interplay between spontaneous improvisation and selected elements from the dominant song culture, termed "pot-pourri" songs (Moog, 1976) and "outline songs" (Hargreaves, 1996).

Overall, there is evidence of increasing sophistication and complexity in relation to young children's learning of songs from the dominant culture.

The previous research had also suggested that singing development tends to be relatively linear in nature, following a path of increasing complexity. For example, a USA study of the spontaneous singing of two-year-olds' first songs reported evidence that "phrases are the initial musical units" (Davidson, 1994, p. 117). Such phrases are characterized by limited pitch range, a certain disjunction of key/tonality and a descending contour.

In contrast, Johannella's new Italian data of two- to three-year-old children provides evidence of much greater developmental diversity. Some children followed the expected linear hierarchy pattern, with song phrases being more accurately reproduced than complete songs. Yet other young children, exposed to similar amounts of parental support and singing experience, were much more advanced. This latter group were already able to reproduce complete songs in tune and with an artistic expression of all their basic musical characteristics (see lighter bars in the figure).

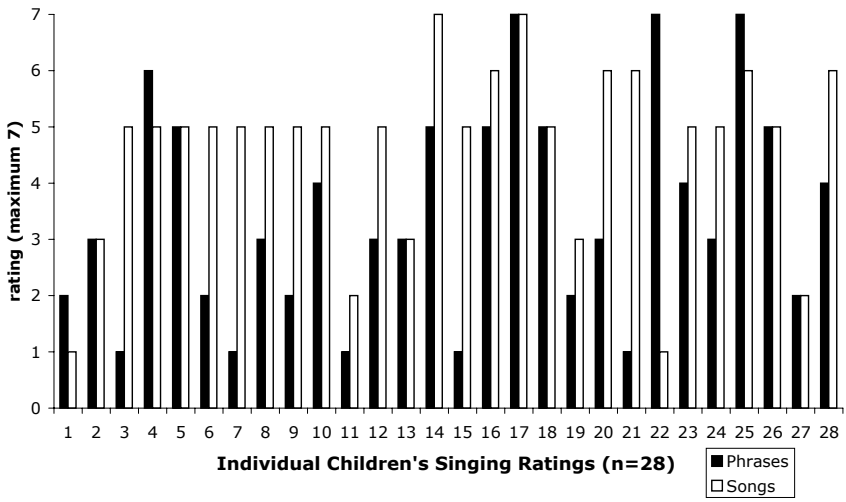

Figure 0.1 Accuracy ratings of Italian children (n = 28) aged 2.6 to 3.3 years in imitating song phrases and complete songs modelled by their mothers. Ratings are based on a seven-point scale of perceived accuracy (Tafuri and Welch, in Welch, 2006).

Overall, this research has generated a unique data set that is both informative and powerful in its implications for music education policy. The research design not only provides evidence of detailed variations in musical growth, it also implies that we should seek to ensure the widest possible sustained engagement in singing between carers, especially mothers, and their children throughout the pre-school years.

We know from other research that musical activity embraces multiple neural networks (*cf* Parsons, 2003) and that sustained engagement in the arts has lifelong positive benefits of higher levels of cognitive functioning (Arts Education Partnership, 2002). In this book, Johannella details for the first time how it might be possible to link such previous findings and their underlying principles. What her research proposes is that we can bring about a major beneficial shift in many children's development if we are able to provide sustained opportunities to support mother-carer-child interactions in singing from the first months of life. This is hugely important research and owes much to her personal commitment, drive and imagination, as well as the ongoing dedication and enthusiasm of her colleagues and participants, both younger and older.

All those who have an interest in fostering and maximizing the musical, social, emotional and intellectual growth in our children – whether parents, carers, teachers or policymakers – should read, recommend and act on this book.

Professor Graham Welch,
Institute of Education, University of London
May 2008

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Introduction
The Reasons for a Research Study

One day, six-year-old Michele returned home in tears: “Mama, the teacher told me I sing out of tune.” His mother was surprised; to her, the child usually sang in tune. Maybe at times he was little bit off key in some passages, especially if he did not know the song well or if he was playing; sometimes, he had fun distorting the songs with his little sister. He never thought that he sang out of tune; in fact, he was quite proud of his musical abilities. This was why the teacher’s comment frustrated and humiliated him. What could have happened? Perhaps he sang badly at that moment because he was distracted, and the teacher, who did not yet know him well, had immediately passed judgement and put him in a category that some teachers appear to use often quite confidently.

Episodes like this appear to be very frequent and we hear it over and over again from teachers and parents. Is it possible that so many children sing out of tune? Or is it something that is not generally understood, particularly by educators? Should their role not include “teaching children how to sing in tune”?

This last question is how it should be, in fact. Nevertheless, we very often hear, on precisely such occasions, a prejudice that does not die easily: you are born with a good ear! The ability to sing in tune is a “gift” of nature from which some are excluded. Is this really the case? Or is it simply a convenient excuse to justify this widespread failure in education? What if we should try to discover when and how this skill is formed? What if we should attempt to understand the mechanisms, to find out how much can depend on hypothetical gifts of nature and how much comes from the development of physiological and psychological processes, in addition to the influences that come from the environment and education? These nagging questions gradually led to the idea that there was a need for scientific research to investigate, in a rigorous and systematic way, the development of the ability to sing in tune.

What really convinced me of the importance of this objective was the anthropological, cultural and social value of singing in all cultures. It is a profoundly human activity, practised in the most diverse circumstances as a collective (as well as personal) instrument of shared communication. On the numerous occasions when people sing together, events like festivities and religious functions, as well as political gatherings, if a person feels that his or her voice does not blend with the others but is out of tune with the rest because he or she is not producing exactly the same melody that the others are singing, it causes embarrassment, both for the person in question and for the people nearby, and the individual feels somewhat excluded. Singing can be, and in fact is, a significant instrument for uniting or dividing.

Before initiating the actual fieldwork of the research project, it was necessary to do something that in practice was the first step of the project itself, and that was to embark on a thorough study of the theoretical fundamentals of the problem and the research already undertaken.

This groundwork led me progressively to a wider research project, from both the temporal and musical perspectives.

First of all, I saw that there was the need to study younger and younger children: age 3 ..., age 2 ... until, on the basis of important research results, I came to the point at which the auditory system begins to function, and that occurs during the final months of prenatal life.

Secondly, I saw the limitations that would ensue from following only the vocal production of children, isolating this from the ensemble of instances of musical production from which it derives, develops and becomes apparent.

It was in this way that a rather demanding project began to take shape. To begin with prenatal life, follow up the children for several years, at least until they were about to commence elementary school and to take into account various aspects of musical development: this all meant preparing a research protocol that was rather complex, yet highly appealing.

I spoke about this with my friend and colleague, Donatella Villa, a teacher at the Vassura-Baroncini Municipal School of Music in Imola and she was soon as enthusiastic as I was. Yes, we would definitely have to get to work on this. We felt that it was worth the effort. Friends and colleagues who are psychologists and musicologists gave their approval and encouragement.

In this way the *inCanto* project was born. It was to be a longitudinal research project (meaning that it would take place over a fixed number of years) to study musical development, in particular the ability to sing in tune, in children of age zero to six. Whilst making an initial overview of the panorama of studies available in this field, I became aware of their variety and also noted a definite change in perspective. Notable advances had been made since the 1940s when Revesz claimed that the first year of a child's life is unimportant for musical development and that musicality (musical sense, talent) is innate and impervious to education (as recounted by Teplov, 1966, p. 53).

The first (and until now the only) ample and systematic study on the musical development of children during the early years of life was that undertaken by Moog in 1960–61 for his doctoral thesis (published in the English version of 1976), a work that still marks a milestone in this field for the number of subjects (about 500 children), for the period examined (ages zero to six) and for the musical experiences taken into account (singing, motor responses to musical stimuli, language-music-rhythm).

On the basis of the results obtained, Moog traced an interesting profile of musical development – from which we shall note some aspects in the pages that follow – but his research left some questions open. One of these related to the influence of family and environmental conditions on the development of the identified skills.

From that time on there was a progressive increase in studies undertaken on the perceptive-cognitive and productive skills of infants from the neonatal stage to the first years of life. Whilst retaining Moog's study as a basis, we could not ignore the fact that almost forty years had passed. This was another factor that convinced me to embark on new research that would put greater focus on methodological aspects and would respond to the questions left open by Moog himself, as well as by subsequent studies.

The Reasons for this Book

This book is not meant to be a research report in the strictest sense. That would mean employing a literary genre with precise rules as used by the scientific community. Particular results of this research had been published already in recent years in specialized journals as segments of the whole project were studied and interesting findings emerged. However, this book is intended to be an instrument for the general transmission of the major research outcomes. These are examined panoramically in a synthesis that highlights the most important data. We shall not describe here all the results obtained during those six years of work. We shall limit ourselves to highlighting those obtained during the first three years. The main reason for this is because, during the course of research, we realised that these are precisely the decisive years in which the ability to sing in tune is indicated and is decisively established. The activities of the further three years (three to six) can confirm or contribute to its development in the event that this has not already occurred, but they do not appear to have the same decisive importance as those of the previous phase, a period to which there is normally not enough attention paid.

Accordingly, in this book, we wish to describe a process of development related to the musical ability of children, taking into consideration the space of time from the later months of prenatal life until age three. The innovation of this work that we are presenting here lies in the fact that it is the first research project to deal with the systematic study of the development of several musical abilities through observation of the skills gradually learned by the same group of children, stimulated by an appropriate programme of activities and accompanied by the support of family members.

As the programme of musical activities offered to the children in this research study had a specific role, this book also presents some pedagogical-didactic guidelines that had proved to be effective when applied during the study. The plentiful results that were obtained allow for educational processes to be planned that take into consideration the initial predisposition of all children, and that follow the stages of development of musical skills from the first months of life. In this way, it is suggested that all can achieve the full development of their musical ability.