

CHILDREN'S CONCEPTUALISATION OF MUSIC

Tânia Lisboa

Centre for the Study of Music Performance, Royal College of Music, London, UK

ABSTRACT

Background. A large body of research has been dedicated to the study of music performance. However, the processes involved in children's acquisition of the cognitive mechanisms and motor skills required for music performance have not been fully investigated. For instance, how do children represent aspects of their pieces and performances in their minds, and how do mental representations guide interpretation and technical achievement at early stages of musical development?

Aims. This paper outlines the processes involved in conceptualisations of music, particularly focusing on the variability of practising and teaching strategies. It relates to issues of mental rehearsal and representation showing how children can create "pictures" of the pieces to be performed, and/or the performance itself in their minds.

Method. Three children were interviewed and filmed in lessons, practice sessions and performances of different pieces of music for a period of 20 weeks, exploring different learning strategies (e.g. analysing the piece, drawing the phrasing). Both the interviews and their playing were analysed in detail. Sight-reading and performances were evaluated by three external examiners and by the children, five years into the research.

Results. This paper shows that mental representation as a form of "musical knowledge", enabled students to assess different performance tasks. The results show that children's conceptualisation of music is a complex mixture of explicit knowledge articulated through language, and implicit understanding conveyed through playing.

Conclusions. The paper highlights the need for greater resourcefulness when teaching children. The findings have implications for musical education, showing that what children normally do in other areas of their lives could contribute to forming the schema in music making (i.e. drawing, painting, singing). By nurturing their individuality and stimulating their creativity, children's musicality can fulfill its proper role as a vehicle for artistic expression.

1. INTRODUCTION

The concept of musical representation is quite abstract, but in one form or another, musicians have always expressed some form of mental image of pieces of music- if only because they have to anticipate what they are going to play and what it will sound like. For example, reading a dot over a note on a printed score may create an image of something short and/or light, expressed in terms of shorter and/or lighter sounds. The conception of style, or the "feeling" of sadness related to minor keys, are instances

of mental representations of, for example, the character that one wants to convey in performance. Such representations or concepts may guide the choice of the technical means employed in a musical performance.

Lehmann (1997) points out that music performance requires performers to "picture" (represent) various aspects of the performance in their minds, as for example knowing where a note is located on their instrument, being able to respond to performance problems and interacting with other musicians. Representations are specific to the task demands that musicians may encounter and they are acquired through involvement in specific practice activities. He suggests three necessary mental representations for musical performance, which are constrained by the task demands: "(a) a mental representation of the desired performance goal, (b) one that represents the current performance and, (c) a representation of the music in terms of its production aspects" (p.141).

Hallam (1997a) refers to *mental representation* as "musical knowledge"; this is the necessary basis that enables students to assess different performance and practising tasks, to identify task difficulties, recognise errors, monitor progress and to take appropriate action for developing effective practice. In considering the acquisition of such a knowledge base, she agrees with Sloboda (1985) in that:

"the aural schemata required to develop an aural knowledge base can be acquired by listening to and analysing music independently from undertaking practice. However, the knowledge required to assess the nature of the task, select appropriate strategies, monitor progress towards the goal, and change strategy, if necessary, goes beyond the acquisition of an aural representation of the music. The development of such skills forms an integral part of the process of learning to play an instrument. Nevertheless, listening to music and being involved in a variety of musical activities are likely to be beneficial in developing the aural skills important for the monitoring of practice and performance." (Hallam 1997a, p.104)

The idea of variability of practice, with aims that go "beyond the acquisition of aural representations of the music", forms the basis for this investigation. This paper addresses the question of how an instrumentalist's conception of music, as a form of musical thinking, can be formed and expressed at early stages. It shows how children may acquire representations by listening, analysing, playing and talking about music in order to build a more reliable schemata for learning a new piece of music.

2. METHOD

This paper reports findings derived from data collected in one of three studies (see Lisboa 2002) involving case studies with three children (cellists aged 9, 12 and 14), learning different pieces of music. In the first study, the participants approached a new piece of music by practising it as they normally did (mainly repeating it from beginning to end). This established the baseline for the second study reported here, in which the participants approached a new piece of music by: a) being involved in a simple analysis of the piece before practising it, b) drawing their “image” of the piece; c) watching and discussing performances and d) talking about music. In the final study, they learned a third piece of music through singing before playing it.

This investigation is *exploratory*, maintaining the “real” working environments of the children involved. The method relied on both quantitative and qualitative analysis of the main data and involved a variety of techniques: observation, interviews, questionnaires, and video and audio recordings. Interviews, sight-reading, practising sessions, performances and auto-evaluations were videoed. Four sessions were selected to be analysed in detail through the study of graphs of the amplitude (dynamics) and timing levels. The evaluations of sight-reading and performances were carried out by three external examiners and by the children, five years into the research, when they were interviewed again. Interviews occurred within each session, with the character of informal conversations about the work, and these form the main data for this paper.

2.1. The music

A piece was composed specially for this study, in the form of *Theme and Variations*, involving simple musical features such as major and minor modes, basic rhythms, four bars phrases and tension/resolution harmonies at the end of phrases. This paper concentrates on the *Theme*, written in A minor, incorporating four bar phrases, with the first phrase being repeated after eight bars and developing towards a short coda (see fig.1). The technical difficulties presented in this piece were related to the players’ capacities and abilities: first position with some extensions, a mostly legato bow stroke, and some staccato phrases. The piece had no title, no dynamic markings, and very few articulation marks. The main aim was to allow the children to decide their own markings, according to their initial understanding of the piece.



Figure 1. Score of the piece learned during this study.

The participants also watched a video of the third movement of the Elgar’s cello concerto played by Jacqueline du Pré, in order to study general issues related to expert performance.

2.2. Procedure

Prior to starting to practise, a simple analysis of the harmony, mode, and phrasing was carried out with the help of the teacher/researcher. The participants were first asked to listen to chords played on the piano, in the key of the piece (A minor) followed by its corresponding major key, and then to discuss the difference between major and minor modes. The second stage involved listening to the piano part played by the researcher whilst following the cello part and imagining what it should sound like - two of the three children found this very difficult, but did try to *hum* the cello part stating they acquired an idea of the “type” of music it was, just by listening to the piano part. The third stage was to “feel” and find the phrases, whilst listening to the piano part, by taking a breath when they felt it was the end of a phrase and the beginning of another. This was followed by talking about phrase boundaries and by sight-reading the piece on the cello.

Assuming that, by this stage, some form of mental representation of the piece had already started to be formed and in order to investigate aspects of the children’s understanding of the piece, they were asked to “draw the phrasing”, using colours and shapes that could represent the music. The aim was to explore means of expression away from technical constraints and avoiding the difficulties related to verbal descriptions.

The participants were also asked to choose a title for the piece, which represented their “feelings” about it, and subsequently mark the dynamics in the cello part. Some musical terminology (phrasing, harmonies, articulation) was introduced to the students for the first time during the study and this may provide an idea of the level of the participants.

3. RESULTS

3.1. Building the schema: The study of the music away from the instrument

The results of the previous study showed that when left to their own devices, the participant’s practice involved mere repetition from beginning to the end of the piece. Sight-reading included several pitch and rhythm mistakes, and consequently, performance was poor and inexpressive. By contrast, the analysis of the data in the present study, revealed more expressive performances and showed that each child acquired an individual conception of the same piece that transcended the marks on the score. Nonetheless, their individual understandings shared common ground related to the structure of the piece. This was demonstrated first by their chosen titles; second, in the drawings of their understanding of the piece and thirdly, through their individual dynamic marks. For example, the titles *Sad Song*, *Proud Funeral March* and *Lamento*, clearly show an understanding of the minor key (commonly associated with sadness) but they differ in character. Although a precise interpretation of the drawings was not possible, each drawing reflected a first view (or feelings) in relation to the

character of the piece. This work functioned more as a way of exercising other means of expression in a non-verbal manner. The drawings and the children's attempt to explain their meaning verbally are shown below:

Participant A stated that the piece was "low, not that happy, sad and slow", thus, her title: *The Sad Song*. Her dynamic marks revealed a growing understanding of key structure: changing her decision to play *piano* at the dominant chord (bar 4), and *forte* at the tonic (bar 8), to *forte* followed by *piano*, according to what she said, "sounded better". Her representation of the phrasing through the drawing, also showed aspects of her understanding of the music (see fig. 2). She described it as representing the "bits" that build up the *Theme*, like a "big town" made up of "little buildings". Although one cannot determine the extent of such understanding, her drawing represents the hierarchical levels of phrasing in a rather intuitive way, and could be interpreted as showing long phrases incorporating shorter motivic cells.

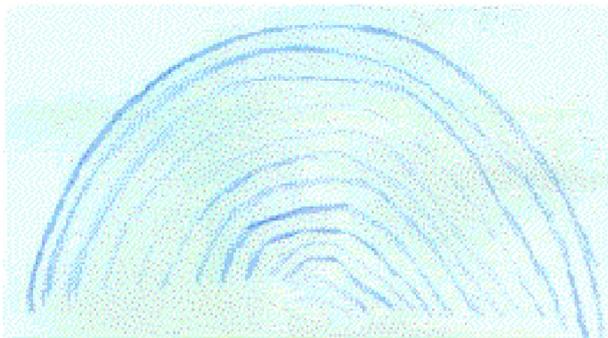


Figure 2. Drawing of the phrasing by Participant A.

Participant B stated that the piece was sad, but also "very proud" and "big". His understanding of minor mode was expressed when asked why he chose *The Proud Funeral March* as a title:

"You are not happy when someone dies so it is sad and solemn, and slow... It sounds like a march, like in olden days when people were walking along the streets with the case, with the body in, behind them and just slowly marching along".

Dynamics were marked on the music after trying them out and generally following the melodic line: *crescendo* towards higher pitch, and *diminuendo* when the melodic line went down, but never *f* or *p*, which suggests more an interpretation of phrasing than dynamics. This participant's drawing (fig. 3) represents several bars forming one phrase, "very big" but containing "little bits to it", and "growing to the end. It highlights aspects of this child's understanding of the work, which relates to the structure of the phrases (i.e. musical cells forming longer phrases) and the development of the piece (e.g. phrases "growing to the end").

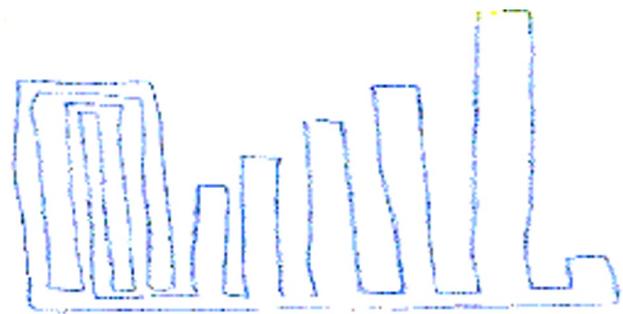


Figure 3. Drawing of the phrasing by Participant B.

Participant C stated that the harmonies of the piece played on the piano felt like "somebody walking somewhere" and it should be played in a "walking pace", subsequently naming the piece *Lamento*. In her drawing, brown colours were chosen because "the music was sad" and she explained that she used curved lines to represent the melodic line, a pointed shape to represent the sharps, dotted lines to separate phrases, and semi-circles for long notes (see fig. 4). Thus, this participant also demonstrated awareness of the piece's expressive characteristics before starting to play it.

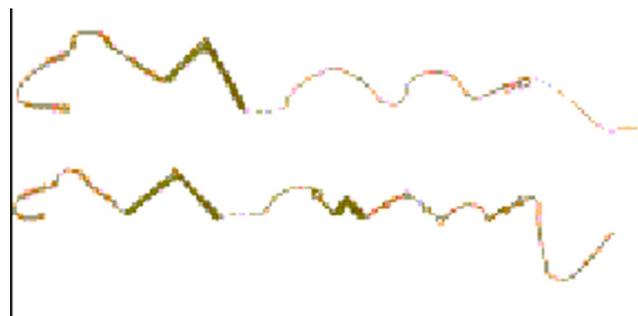


Figure 4. Drawing of the phrasing by Participant C.

The study of the piece away from the instrument before practising, provided the basis to form some sort of conception of the piece, from which the children could construct plans to practice, aiming at more expressive performances. However, although they all stated that they knew more *about* the piece after exploring approaches other than playing, practising mechanisms did not change as result of having an initial understanding of piece. As derived from the interviews and video data, the main practising strategy can be summarised as: play and listen, detect errors in a rather intuitive way, repeat it several times improving the flow of that phrase, add dynamics (expression). Nonetheless, in preparing for a performance, practising was guided by the way they thought about the piece:

"...while I was practising, I picked sort of a procession in the street, so I sort of played along to that." (Participant B).

Sight-reading for all children was more accurate than in the first study (quicker correction of accidentals as soon as they *heard* a mistake - and this time they could detect that it was a mistake),

and performances incorporated dynamics and a sense of character. This was confirmed by the graphical analysis of their playing, by the evaluation of external judges and by the evaluations of the children themselves (see Lisboa 2002).

3.2. Developing a representation of performance

The main goal of the informal performances was for the children to communicate their understanding of the piece to a colleague, and to find out how someone else could understand the same piece differently. The participants discussed each other's performances and their comments revealed once more their individual understandings of styles and character. For example, participant C comments on participant B performance, compared to her own understanding: "I think he thought that it was a march and it was quite strong and marching"... I thought it was more dancy and he thought it was stronger, I think".

The study of the music away from the instrument generated elements of mental rehearsal and also provided the basis for considering general performance issues. For example, children at this most basic level were able to discuss important musical issues, such as faithfulness to the score:

"Marks on the score...yes, but then I feel that you have to add part of your own to it as well... you won't cross out everything, but just add small bits you feel that should be there just for yourself... to make it easier for you to pass it to other people... your feeling of the piece. (Participant B)

Finally, all three children watched and discussed a performance by a professional cellist, in order to develop some sort of conception of what it is to "perform". On the one hand, talking about someone else's performance implies more freedom of expression and less awareness of one's own playing. On the other hand, it provides the means for insights into one's own playing and this was reflected on the children's interviews. The analysis of the transcripts highlights the children's individual ways of thinking about music with emerging themes such as: confidence (attributed to practising), musical communication, musical understanding, interpretation and style, individuality and fidelity to score: "Yes, she follows but she puts lots of stuff in as well...From her inside, it is just what she feels the piece, it is like everyone has their own ideas so someone else could play it differently"(Participant A)

The common themes extracted from the interviews show a number of interesting attitudes: **(i)** Performers do not really need to observe every detail of the score; **(ii)** Movement is part of interpretation and performance; **(iii)** Interpretation can vary according to choices of: a) vibrato; b) dynamics; c) what you decide to follow or not from the score; d) intonation; e) speed; f) articulation; g) knowledge about music; **(iv)** knowledge of music is very important to performance (e.g. knowing the period when the piece was written tells you about style); **(v)** knowing music is "like having a story", and you can learn it by listening to other people; **(vi)** Music is an art which comes from the individual, and it is the individual who makes it interesting.

The children's intuitive approaches to issues of music performance certainly had an effect in their representations (and aims) in performance. The graphical analysis of their playing showed an improvement in phrasing and quite clear changes in dynamics and articulation, thus, highlighting the influence of this type of work in the children's performances.

3.4. The participants' evaluation of the work

Five years after the start of the research, the participants evaluated their work, following the same procedures as the external examiners and talking about what they were trying to achieve. Some of the emerging themes are worth mentioning, as they have important implications for teaching:

(1) The three participants stated that they failed to observe the score carefully in the previous study; (2) understanding of the music was limited when approaching the piece by playing, without studying the music. This was defined by Participant B as "reading it off the script and not really playing it"; (3) by contrast, being involved in a simple analysis of the piece led to *learning* it better, thinking more *about* the music, and having more concentration in practising than in the previous study; (4) listening to the piano part was helpful in forming some sort of aural representation of the piece: "I understood the sound of it"(Participant A).

The results show a high degree of consistency between what the children thought of their own performances, the evaluation of external judges, and the results of the detailed analysis of the data: there was more improvement from sight-reading to performance in the present study than in the first study (which, for fairly obvious reasons, showed very poor performances).

In summary, the results suggest that confidence in playing can be built by simply spending time with a piece of music and practising repetitiously. However, a limited (or *faulty*) conception may be formed through repetition of a simply intuitive approach to the piece, without knowing *about* the structure of the piece. Thus, repetition requires a *purpose and direction* in order to tackle specific instrumental and musical problems. By studying the piece before playing, observing the score accurately, the piece was *better learned* - more assimilated and less easily forgotten. Although this does not provide an "audible" model for practising (as in singing - see Lisboa 2002) it, nonetheless, includes elements of mental rehearsal, allowing mental representations, richer in expressive elements, to be formed and on which the children can concentrate on when practising. The integration of the various practising components in constructing a mental representation which incorporates elements of their understanding of the piece, can lead to a representation of the music which synthesises practical competence with musical understanding - a form of embodied thinking.

"...understanding the music, is sort of understanding what the composer meant by writing music, and what it was meant to say, and I'm getting an image of that, well, hopefully I'm getting the same image, and then I'm telling the people I'm playing it to." (Participant C)

4. CONCLUSION

This investigation is a preliminary attempt to understand how children's *practice* is connected with the way children *think* about music. It shows how musical understanding and practising interact in the acquisition of a conception of music, reviewing some of the processes involved and demonstrating how practical work can lead to higher levels of musical expression. Through different approaches to new pieces of music the children acquired different degrees of understanding of the structure of pieces. Through achieving higher levels of musical understanding, children acquire knowledge *about* music, which in turn influences overall musical development.

By studying the piece away from the instrument, these children may have come closer to Lehmann's (1997) "three necessary mental representations for the music performance" mentioned in the *Introduction*. This is here translated into "imagining" what the piece should sound like, aiming at "externalizing" such representation. Evidence of this is shown in the interviews when for example, one of the participants states that he practises while imagining the performance and trying to convey "that feeling". Although this paper does not address all the issues raised by Lehmann, it opens the way for further research with children in the proposed area of mental representation.

The findings have implications for musical education, suggesting that the children's instrumental constraints impeded their ability to express themselves and highlighting the need for greater resourcefulness when teaching children – to view the instrument through the "lens" of music rather than music through the "lens" of the instrument.

5. REFERENCES

1. Hallam, S. (1997). Approaches to instrumental music practice of experts and novices: Implications for education. In Jørgensen, H. & Lehmann, A.C. (eds.) *Does Practice Make Perfect? Current theory and research on instrumental music practice* (pp. 89-107). NMH-publikasjoner. Oslo, Norway: Norges musikkhøgskole.
2. Lehmann, A.C. (1997): Acquired Mental Representation in Music Performance: Anecdotal and preliminary empirical evidence. In Jørgensen, H. & Lehmann, A.C. (eds.). *Does Practice Make Perfect? Current theory and research on instrumental music practice* (pp. 141-163). NMH-publikasjoner. Oslo, Norway: Norges musikkhøgskole
3. Lisboa, T. (2002). *Children's Action and Thought in Cello Playing*. Unpublished PhD Thesis. Sheffield University.
4. Sloboda, J. A. (1985). *The musical mind. The cognitive psychology of music*. Oxford: Oxford University Press.