

Sourcing gesture and meaning from a music score: Communicating techniques in music teaching

Andrew Blackburn *

Sultan Idris Education University, Malaysia

Music scores carry multiple strands of information, both simultaneous and sequential. A score is a set of instructions for the performance of specific tones, pitches and durations. In the music teachers' studio, teachers and students take this information and 'reverse engineer' appropriate gestures to re-create the composer's instructions using notation (Tormey p.2). Gestures may be explicitly present within the score - musical and visual. Through discourse with the score, student and teacher learn to become a conduit and contributor of musical ideas, through performance to an audience. In this article, two graphically notated, pipe organ works are considered from the perspective of the performer: Ligeti's 'Volumina' (1961-2) and Harvey's 'Eight Panels', (2007-9). Each work requires a different stance in preparation to make sense of the musical experience. The scores graphically show the gestures required to performatively re-animate each piece. This is a highly efficient and a precise teaching model, vital in the music teaching studio for understanding both explicit and implicit paradigms of instrumental performance.

Keywords: Music education; gesture; score; pipe organ; Ligeti; Volumina.

Introduction

A further sub-title for this paper might be the discussion of ... 'a new approach to interpreting a score'. It focusses on the preparation and performance of two compositions for pipe organ by two composers - Gyorg Ligeti *Volumina* (1962) for organ, and Lawrence Harvey *Eight Panels* (2007) for organ and live electronic processing. Implicit in interpreting a music score is a discourse between composer, score and interpreter (Mazzola, 2010. p 5), and consideration of this discourse is central within in this paper. An important aspect of learning to play a musical work on an instrument, and understand the musical gestures notation can semiotically convey, be they stave and stick notation or graphic is, in parallel to teaching the specific instrumental techniques, movements and physical gestures required to play a musical instrument, the central activity in the music teaching studio.

The notion of musical 'gesture' and how gesture is translated into personal meaning is very important. Whilst this has acknowledged overtones of psychology, it is beyond the reach of this paper. However, as Swanwick observes,

* Corresponding author. Email: andrew@fmsp.upsi.edu.my

“Music shares with all forms of discourse, four major psychological characteristics:

- We internally represent actions and events to ourselves - we imagine;
- We recognize and generate relationships between these imaginings;
- We employ systems of signs, shared vocabularies;
- We negotiate and exchange our thinking with others (Swanwick, 2001, p. 31).

Using these frameworks, it will become apparent how the scores of the works under consideration, through ‘imaginings’, ‘relationships’, and ‘shared vocabulary’ become the interface for the ‘exchange of thinking’ which occurs between composer, interpreter and audience in performance, and how these characteristics relate first to the act of interpreting a music score, and then to interactions which occur in the music teaching studio. Although the two scores under consideration are both graphically notated, I believe the findings are valid for all types of scores. As Mazzola observes, “... the intermediate gestural realization of the score symbols, their ‘thawing to gestures’ that act on the instrumental interface and thusly generate sounds, plays a major role but this is unfortunately not yet a relevant topic of performance theory” (Mazzola, 2010, p. 4). It is hoped that this paper will perhaps generate some interest in this as a ‘relevant topic’.

Definitions

A Musical Score is defined by the Cambridge Dictionaries Online as “a piece of written music with the parts for all the instruments and voices arranged on separate lines.” This is treating the word as a noun, and with which there is no argument. But this definition is not complete, as it does not take account of the artistic and aesthetic ideas contained within a musical score. We need to look at other more sophisticated definitions and uses of both the word and its significance in musical utterance. Here we come up with several issues that need some exploration before returning to the main theme of this paper. As our first definition of the term implies, the score is a physical object and, when talking about music, distinguish between a musical work, its score, and a performance of the musical work (Ingarden, R cited by Bowen, J in Cooke and Everist (2001) p. 424.). To consider the score itself, Bowen attests that it is either:

“... a sample (a transcription of a single performance...) or a summary (a unique, personal attempt to establish certain essential qualities for an idealized performance of the work)... a score can be a sample of only a single performance of a musical work or a summary of several actual or potential performances of the (presumably) same musical work. Similarly, in most of the ‘pro-active’ or ‘prescriptive’ scores of Western works, the score is an attempt to define the boundaries for future performances. ... [and a] spatial representation of only some of the elements of the temporal phenomena we call music.... [furthermore] the sound of a musical performance is fleeting, however the work exists even when the performers are silent, and this continued existence is due to human memory” (Bowen, J in Cooke and Everist. (2001)p.425).

The role of the teacher in the music teaching studio is therefore to not only teach the technique of the instrument being studied, but to enlighten and guide the student towards an understanding and awareness of the musical work. It is a task that occurs, however implicit or explicit this may be, of this more complex definition of musical score, and its place and role within the music/performance nexus. It will be explained in greater detail in the article, a way of explaining and sharing this knowledge will be through my own experience and interaction with the scores and ideas contained in the two works under discussion.

Returning to ‘gesture’, there are several contexts in which I shall use the term. The MacMillan Dictionary offers “...a movement that communicates a feeling or instruction mean sounds which is transformed by our mind into expressive shapes” (online English dictionary from Macmillan Publishers Limited, retrieved 6 Jan 2012). The next definition and use of the word in this paper has to do with the gestures that are present as visual cues in the scores (the semiotic symbols printed within the artifact).

Gesture is also fundamental to the work of the artist. An artist like Vermeer clearly used miniscule gestures or brushstrokes in order to depict nature on canvas in great detail. Jackson Pollock, however, made sweeping movements and painted with his entire body in order to produce his drip paintings. It is in the white of the canvas or between the paint splatters, that Pollock's gestures and the gesture of the work itself are made evident. (Marky, 2002, para. 12)

‘Sonorous’ gestures as encountered in the are ‘perceived as positioned in relationships with each other, as musical form’ (Swanwick, 2001, p. 32). Unifying all three definitions is a sense of location, relationship and movement, as well as a significance of each gesture. That these characteristics are also found in music (Swanwick), and are a necessary element of a written score, their impact on performance should not be discounted. Equally, as teachers of music, understanding this assists us in our choices and decisions as we encourage our students to work with the scores of pieces they are learning - not only being able to ‘play the notes’ in the correct spatial and temporal relationship as they appear printed on the page, but to engage in the deeper search for musical meaning that lies nascent within the score artifact and constitutes the ‘musical work’ which is separate and individual from the artifact.

The choice of works for pipe organ and electronics as the medium for this study will be relatively unknown to most of this audience, but this unfamiliarity places readers in a similar position to any performer approaching a new score. There is much unfamiliar territory, so one looks for the known ‘systems of signs,[and], shared vocabularies’ to provide guidance. As an organist and teacher of music, learning these works placed me into a similar place to that of my students, and much of what will follow is a consideration of that journey, focussing particularly on my own discourse with each piece, through the scores. The rehearsal and continuing reflections on the experience of preparing and performing these works qualifies the methodology as practice-based research. From this journey I have found considerable illumination of the role of the teacher in a music teaching studio, and certainly my own.

Practice-Based research

Penny and others (Coessens, Schippers, Toroz Perez et al) have clearly established there is a crossover between the usual activities of a musician, teacher and that of a researcher which

positively combine to create a powerful research environment within the musician/teacher's normal daily activity. Penny writes:

Exploring a rehearsal-performance metaphor for research establishes references across these startlingly similar disciplines. Processes common to both include project and program design, identifying areas or repertoire for investigation, developing sets of skills, studying the microcosm, trialling techniques or methods to discover solutions and insights, reflection and adaptation, and adding value to personal and broader performance / research practice through greater knowledge and understanding (Penny, 2009, p. 17).

Change from the usual music/lesson teaching practice to research occurs when viewed in the light of writings by Donald Schon (1983). He offers two types of reflection: reflection in action; and on the action itself. The whole process can be drilled down further, investigating the micro-responses of the performer when working in this new performing/learning environment. Huib Schippers in *Marriage Arrangement Works* states "... the reflective practitioner/teacher goes through clusters of informed decision making. ... various approaches to each phrase are tried, discarded and reshaped." (Schippers, 2005, p.37).

Susan Kozel describes an outcome of artistic research (referring to Rancière, 2009) as attempting to...

reconcile the 'sensible and intelligible' ... instead of denouncing aesthetics as a 'confused type of thinking confounding pure thought, sensible affects and artistic practices' we should embrace this 'knot' of thought, practices and affects. He [Rancière] calls this aesthetics. With a subtle reframing ... [we can] see this knot as being the incredible richness of artistic research, but artistic research adds a few more strands to the tangle because it is frequently interdisciplinary and collaborative (Kozel, 2010, para. 5).

As reflective pedagogues and performers, it is evident that the research process is clearly happening as we engage "in the researching process by acting out and simultaneously judging the progression of [ideas and music practice], solving problems, ad hoc, searching for new paths on an individual basis" (Coessens, Crispin and Douglas, 2009, p. 24). Although referring to performance practice, I have found this last statement equally describes the interaction between student and teacher in the music teaching studio. As Coessens, Crispin and Douglas articulate, this approach has left me, as researcher, and performer, in this case preparing *Volumina* and *Eight Panels*, ... "free to go back and forth between different art manifestations, whether part of his or her own activities, or examples from other artists, in a pedagogical or relational context" (Ibid, p. 24).

The physical (artifact) score

In both *Volumina* and *Eight Panels*, the score is graphically notated. The scores both differ from a conventional music score in that specific tones are not indicated, rather their selection by the player is hinted at. Durations (the temporal relationships) are quite precise, but what is provided is a series of events and changes that occur across a given time span. In

Volumina the time span between sections is about 45 seconds, while in Eight Panels time is measured across each panel - each being 4 - 5 minutes.

Similarly, in the scores of Volumina and Eight Panels, the scores themselves contain series of visual gestures which form the medium for the 'exchange of ideas' between composer and performer. Within the Eight Panels score sound processing and spatialization gestures are also included.

Consideration of the nature of these gestures will form the basis of the discussion of each work in the sections that follow.

"Discourse does not merely reproduce, it also modifies the symbolic form in which it appears" (Swanwick, 2001 p. 30).

A musical performance is a discourse between the performer and the score, animating the music (and its meaning as transmitted from the composer) from the printed page to sound. Jean-Charles François observes,:

"...considering the performer's gesture as a technique , as a means of production, seems poorly suited to a traditional conception of music in which the creation of a musical context through sounds seems more important than the performer's gestures. However, most [instrumental teaching] methods provide a process, from the breaking down of gestures into exercises to the piece itself, through which the gestures can be applied in a musical context." (François, 2006 p. 220)

In preparing a work which is graphically notated, the first consideration is the way that the score is laid out and the information contained within it. Unlike stave and stick music notation, graphic scores are (and perhaps this is their very nature) all quite different. One similarity between the two scores in question is that both are comprised of a series of gestures, and the performer's initial task is to determine the musical meaning of these and then devise a kinesthetic interpretation, which will permit the musical ideas of the composer to communicate itself to the audience.

Whilst this may suggest significant personal freedom to improvise or create 'an impression' of the work, this is in fact not the case. The notation of either work is not "musical graphics": neither is it an intuitive or associative drawing that encourages the performer to invent a way that a piece of music could be.

"Rather, it is a coherent system of signs, whose details can all be translated into musical patterns. A look at the third page of the score of Volumina may illustrates the cluster - through visual analogy. The horizontal dimension corresponds to the flowing of time: The time sequence of musical events (according to the reading habits of the western world) is a left-right succession of notes .. Thus, in principle, each event is fixed in time - the new cluster in the right hand as posits an approximately after 17 seconds, after another 10 seconds of complete, another 4 seconds later." (Herchenröder, 1999, p.62 - 3).

It will shortly be demonstrated that the score of Volumina is as precise in its detail of gesture as any conventionally notated work. The precision comes from the visual-to-kinesthetic-to-performance nexus, and the 'exchange of thinking' (Swanwick, 2001). Can

we perceive the score of *Volumina* form of choreography? I would leave that answer to others, better qualified!

As an organist/performer however, the scores give quite precise directions for spatialised physical movements playing specific areas of the manuals (keyboards) and pedalboard, timbral selections and shifts (stop changes) and temporal relationships between them. In *Volumina* new relationships forged with hitherto silent and often unacknowledged co-performers in many organ performances - the registration assistants and page turner. In *Eight Panels* the score details relationships and co-operation between the organist (no page turner or registrants) and music technologists who during the performance, create a new instrument and sounds within the room in which the performance is occurring.

György Ligeti -Volumina - (1962/3)

The composition of *Volumina* provided a freeing of attitude toward the sound of the pipe organ achieved by new performing techniques. In his volume on the organ works of Ligeti, Herchenröder (1999) titles his chapter on *Volumina* 'An Imaginary Space' (Imaginärer Raum; p. 29). This description is apt, suggestive of new possibilities – performance, timbre and the way the work is perceived by its audience. Integral to this 'imaginary space' is the new relationship of the organist to, not only the score, but the instrument, registration assistants and page-turners too.

Observing the score of *Volumina*, it is immediately apparent that this music is different from all Ligeti's other music. It is his only example of graphic notation, composed at a time when he was rebelling against serialism in music. Ligeti "... developed the idea that a work's formal shape is more dependent upon matters of texture and timbre than harmony, counterpoint or thematic working (for example, in *Atmospheres* for orchestra [1961] and *Volumina* for organ" (Sanson, 2001, p. 29). The score is not indicative of a kind of structured improvisation: graphic notation can transmit information that is both precise and accurate to the extent that two separate performances can be melded to create a single whole. As Swedish composer Bengt Hambraeus wrote, regarding the first performance of *Volumina*:

"... the church authorities in the Bremen cathedral vetoed the concert in the last minute, because of a fourth work in the program – Hans Otte's Alpha : Omega including religious choreography ... Because I was ... working at the Swedish Broadcasting Corporation, it was possible to to arrange, with very short notice, a recording of the three organ works in Sweden. As the most suitable equivalent to the Bremen cathedral organ, we decided to use the one in Gothenborg Concert Hall... But as soon as Welin started to play the eruptive beginning of Ligeti's work, some vital fuses blew, with resulting short-circuit in the electric transmission system. Within a couple of hours a contingency plan had to be organized, with the result that we could have immediate access to two different organs in Stockholm (450 km from Gothenborg!) and as quickly as possible move the organist, his assistants and recording technicians to the other city. The two organs were chosen because they together could provide approximately the same sound as we would have had in Bremen or in Gothenborg. ... Welin recorded all three works twice on the respective organs in the St John and Gustav Wasa churches in Stockholm, after which we together with the technician, synchronised the takes, featuring certain sonorities from the respective instruments. The result: a hybrid organ emerged under desperate and bizarre conditions. ..."

The edited tapes were presented on May 4, 1962 in the Radio Bremen Concert Hall (instead of the cathedral)” (quoted by Herchenröder, 1999, from, Hambraeus, B Twentieth Century Performance Practice, p. 129 – 130).

So we find that the gestures of the score of *Volumina* detail a precise indication of sounds. By recreating the gestures of the work, the tones, and timbre are faithfully reproduced, but without the need to look for individual notes within a cluster or gestural movement. The stance of this paper is to consider works from the perspective of the performer, it is evident that *Volumina* changes how organists interact with the score as they animate the work from gestures.

To perform *Volumina* is to perform a series of gestures which “... opens an inner world of undreamed dreams, of unrealised events ... of unimagined shapes, forms content and colours, and of unprecedented connections” (Coessens, et al, 2009, p. 141). Having performed *Volumina* on several occasions, the preceding comment is a perfect description of what occurs for the organist and assistants. The physicality required to perform the piece forces one “...to become – that which is heard, to BE the music” (Ibid, p. 150). When learning to play the organ, a standard exhortation is to remain still on the seat to acquire kinesthetic memory of where notes and pedals lie in relation to one’s body. This ‘relaxed stillness’ allows, for example, accuracy of pedalling without the need to look at the pedal-board to find notes, an ease of technique and reaching the various manuals with their different distance and height relative to the player. Performing *Volumina* creates different demands. Precise accuracy of individual notes is not required – a major change in itself, and the way the organist relates to all the keyboards with “fist, the palm of your hand or the back of the hand, as well as the flat, wide part of your feet” (De Pieri, 2009, personal communication) forces the body into unbalanced and different positions.

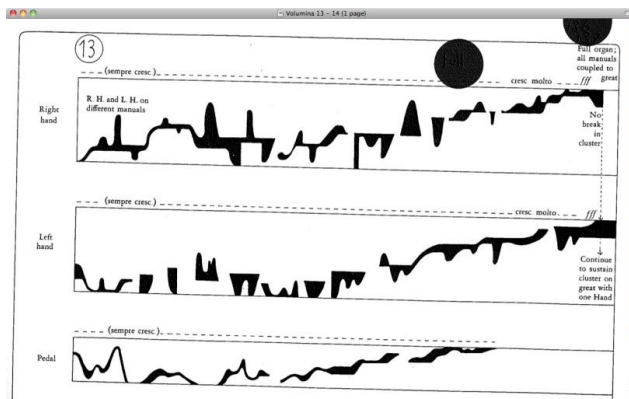


Figure 1. Ligeti *Volumina* 1962/3 [Score], Section 13 - 14.

The gestures which in the score represent a “summary of the music are clearly visible in the score (see figure 1) with meaning that is both inherent within the music itself, and imposed by the performer. In the example above, the right hand/arm has a long upward trajectory with sudden clusters of sound jutting up and down. Playing these clusters, while maintaining the overall shape of the section, requires holding a fairly small cluster with the back of the hand and leaning one’s forearm over the keys, or using the heel of the palm and

spreading the fingers to create a downward rush of sound. Combined with the movement and gestures of the left hand/arm and feet, the movement here is a form of choreographed action of shuffling from the lowest, left hand side of the console, to the highest point, and right hand side. It is physically all-encompassing, requiring the simultaneous use of both feet, hands and arms. The little punctuation points of silence in either right or left hand leave one feeling almost disconnected and out of balance until they resume a moment later, in an inexorable climb of pitch and movement across all the keyboards. The apparent 'jerkiness' of the performance in this piece dramatically contrasts with the manner of playing in more traditional organ technique.

Eight Panels learning process own experience - using video/recordings from workshops

Eight Panels for organ, live electronics and sound diffusion system (Max/MSP) by Lawrence Harvey (2007) with collaboration from Andrew Blackburn, Jeffrey Hannam and Stephen Adam.

Eight Panels is a structured improvisation conceived by Lawrence Harvey in conjunction with Andrew Blackburn. The final score of this work was the outcome of a collaborative process so the discussion here focusses on the process of creation, preparation and performance of the work Eight Panels by Lawrence Harvey (2007), and the changing performative sphere which is engendered by this piece through a structured, joint improvisation created in collaboration with two music technologists. Eight Panels is significant in the canon of works for organ and live dsp because of its development of performative and interactive practices, particularly the performance practice of the organist. It draws further significance from the unique construction of the piece, being a structured improvisation for organist and technologists.

For the organist, performing Eight Panels requires new, significant performative interaction, through joint improvisation with the technologists. It results in rich musical interaction with the organ, which provides the source gestural material for the performance of the technologists who respond with further timbres, musical gestures and content. This circular process continues as the processed sound subsequently influences the musical output of the organist. It is described by Lawrence Harvey in his introduction to the Toorak performance as "a set of agreements ... taking what is improvised and what the electronic processing will do" (Harvey, 2010).*

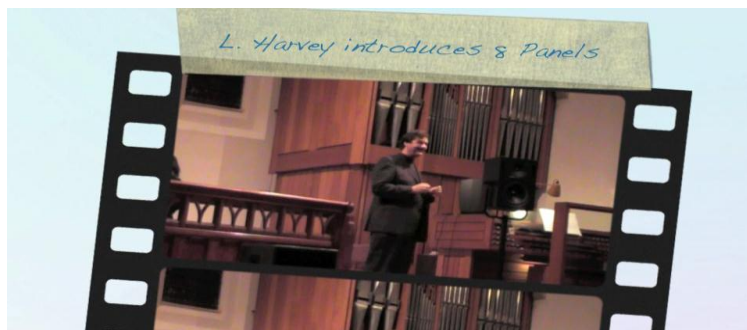


Figure 2: Harvey introduction to the Toorak Performance of Eight Panels May 2010*

* The video of composer Lawrence Harvey and full performances of *Eight Panels* can be viewed at: <http://www.hutes.com.au/PipeOrgan/533/section-3/chapter-10/eight-panels-lawrence-harvey/index.html>

Conclusion

In learning music from a score, be it ‘stave and stick’ notated, or graphic, the performer or student-teacher dynamic enters into a discourse with the content of the musical ideas contained within the score itself. This discourse locates the performer (with their musical interpretive contribution) between the musical thoughts and intentions of the composer and the recipient audience. It is in this location that the musical characteristics – imaginings, relationships and structures – are created through rehearsal and subsequent performance. In creating these musical characteristics and discourse, three types of gesture are requisite, encountered, and created – expressive kinesthetic gestures, the ‘sonorous’ gestures, and the visual gestures contained within the score itself. All three are required to create the musical performance from the preceding discourse.

It has been shown that for a study such as this, Practice-Based Research Methodology is an appropriate methodology, well adapted to investigate the detail and content of musical discourse in performance. It is an individual relationship that is forged between the performer(s) and the music work. However, in spite of the acknowledged individuality of this discourse, the outcomes of this methodology speaks to the wider group of performing musicians adding to their and our knowledge of performing practice and actions which will then inform the teaching of this art/craft.

In these two instances at least, the graphic score is well able to transmit precise musical ideas and intentions of the composer as effectively as the traditional score – by indicating in the score physical and visual gestures required of the player to ‘re-animate’ the musical ideas. All music performance is a series of decisions, movements, actions and reactions of the performer. In a stave/stick score, notes, durations and some dynamics are indicated, and in reproducing these instructions, within the discourse referred to earlier, the player learns certain kinesthetic movements and gestures. In the graphic scores considered in this paper, both composers have reversed the discourse sequence – scoring the kinesthetic and other gestures that, by their performance, lead to the playing of certain tones (notes) and durations.

In considering the score as a metaphor for meaning and gesture in musical performance, insights to the act of performance and teaching are found. The perspicacious music teacher can use this to gain greater understanding of the learning processes of their students. With the conscious use of kinesthetic gesture in performance all practitioners musical understanding and ability to penetrate to, and communicate the core of the musical ideas contained within any score is enhanced. The teacher is able to encourage the student performer to understand the relationship of sonorous gestures to the visual gestures that are frequently apparent in any score, converting these metaphoric movements to physical ones. For all performers, student or seasoned this is a significant component of the performer’s craft.

References

- Blackburn, A. (2011). *The pipe organ and real time DSP: a performer’s perspective*. DMA dissertation, Queensland Conservatorium Griffith University. Retrieved 2 November 2012 from <http://www.hutes.com.au/PipeOrgan/index.html> Accessed 2nd November 2012.
- Coessens, K., Crispin, D., & Douglas, A. (2010). *The artistic turn*. Ghent, Belgium: Leuven University Press.
- Cooke, N., & Everist, M. (eds) (2001). *Rethinking Music*. Oxford, UK: Oxford University Press.

- François, J-C. (2004). Art, musicians and music teaching today. *The Open Space* , Issue 6 pp218 – 223.
- Harvey, L. (2007). Eight Panels for organ, live electronics and sound diffusion system. [Score]. Unpublished manuscript.
- Herchenröder, M. (1999). Struktur und assoziation. György Ligeti's Orgelwerke. Schönau an der Triesting. Wien: Edition Lade.
- Kozel, S. (2010). Moving, Making, Thinking – Considering Artistic research. Keynote address, *Symposium on Artistic Research – Swedish Research Council, Malmö*. Retrieved May 20, 2010, from <http://medea.mah.se/2010/12/moving-making-thinking-considering-artistic-research>.
- Ligeti, G. (1961-1962, rev. 1966). Volumina. [Score] Vienna, Universal Music Edition.
- Markey, L. (2002). *The University of Chicago: Theories of Media: Keywords Glossary* 'gesture'. Retrieved 6 Jan 2012, from <http://csmt.uchicago.edu/glossary2004/gesture.htm>
- Mazzola, G. (2010). *Mathematical Music Theory: Status Quo 2010*. Retrieved 6 January from www.smm.org.mx/.../smm-pe-memorias-2011-v4...
- Penny, J. (2009). *The Extended Flautist: Techniques, technologies and performer perceptions in music for flute and electronics*. DMA dissertation, Queensland Conservatorium Griffith University.
- Sanson, M. (2001). Imaging music: Abstract expressionism and free improvisation. *Leonardo Music Journal*, 11, 29-34.
- Schippers, H. (2005). Marriage arrangement works. *The Australian Newspaper*, Higher Education Supplement, p. 37
- Swanwick, K. (2001). *Teaching music musically*. Retrieved 6 January 2012 from www.ufrng/pemusi/port/numeros/04/num04_cap_03.pdf