Chapter 5
Practice-based Music Research:
Lessons from a Researcher’s Personal History
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This chapter has an autobiographical focus and has been motivated by my belief that researchers have an obligation to find appropriate theoretical approaches and methods for investigating their research interests. Across my own personal history as a researcher I have employed a wide variety of research techniques. When I first entered the research scene, I adopted frameworks that permitted what Frayling (1993) has coined ‘research into practice’. While I came to these frameworks as a performer, I had to undertake research that considered the practice-focused behaviour of others, since the techniques prescribed by these approaches did not allow me to investigate my own practice as a musician from a situated perspective. Thus, the methods I adopted over the course of my career began with the formal experimental designs of psychology, and then gradually shifted in focus to range from decidedly objective observations to highly subjective personal experiences, eventually capturing those phenomena that can be referred to as practice through research (again, after Frayling 1993). In fact, it has only been in more recent times that I have been able to engage with practice as research, though I also continued to stick closely to my academic roots as a music psychologist, drawing consistently on methods from social science.

In this chapter, I draw on my research experience with the aim of presenting the reader with a case for the value and benefit of familiarity with a broad spectrum of possible approaches when attempting to study musical practice through research. In this sense, the chapter is intended as a guide to the empirical methods available to the practitioner entering the research scene and wishing to understand how and why practice-focused research can be developed and/or adapted.

Research into Practice

Research methods applied in investigating musical practice have mainly been concerned with discovering, describing, and characterising new knowledge by posing various kinds of questions to understand musical behaviours, including creating, learning, rehearsing, practicing and performing music. The approaches I describe and discuss in this section constitute the core research tools available in empirical undertakings, which have emerged and developed through the
disciplines of music psychology and ethnomusicology. Some thirty years ago, when I first began my own research, such empirical methods represented the only viable route open to the practitioner in studying musical behaviour systematically.

Quantitative Approaches

For many years, the discipline of music psychology, which I entered as a graduate student, focused on the quantitative approach as an empirical method. In quantitative research, the researcher makes inferences about musical behaviour largely through correlational or causation studies. In correlational studies, relationships between variables under investigation are examined, eliciting one of three outcomes: a positive correlation (as one variable increases so does the other), a negative correlation (as one variable increases the other decreases), and no correlation. The researcher needs to ensure that the variables of interest are properly identified and controlled, for it could be that without sufficient control, other variables interfere and affect the relationship under scrutiny without the experimenter’s knowledge. Causation indicates that the researcher has found changes in one variable that directly cause changes in the other. An example is that playing the piano too forcefully directly causes physical strain. In order to test this, researchers would need to compare, in experimental contexts, people playing music forcefully with people playing much more lightly and measure the amount of physical strain caused.

In these two main models of quantitative work, the data collected are investigated to assess whether or not there is sufficiently robust evidence to support the theoretical/conceptual argument that is put forward by the researcher (Bahnazes and Caputi 2001). The quantitative models are often carried out in experimental, non-naturalistic and constraining settings and assessed through the use of forced-choice surveys. If a researcher decides to work in a naturalistic context, it is then much harder to determine which precise factors cause a specific effect (Windsor 2004). Early in my own career, I drew on such methods as they were the most commonly practiced ones, and they certainly enabled me to advance my knowledge about performance-related behaviours, although I was in the role of the ‘experimenter’.

One research project I carried out using the quantitative approach investigated the role of bodily movement in musical performance (Davidson 1993). This work was driven by a desire to understand the role of expressive bodily movements in my own performance – those bodily postures and gestures that seem to imbue the performance with individualised character, and musical as well as extramusical information. My initial research question asked whether the availability of perceptual information about the performer’s bodily movement provided similar, enhanced or diminished information about expressive intention compared to musical sound alone. Consequently, I needed to devise a way of manipulating the audience experience. I did this by asking four violinists to perform short musical excerpts of their own choice with three different expressive intentions: deadpan
(with no intentional expression), projected (normal performance) and exaggerated (with exaggerated expression). These were video recorded, and clips were prepared for perceptual judgement exploring three different performance modes: vision only, sound only or combined sound and vision. Observers were both musicians and non-musicians and their task was to rate the perceived expressivity of the different modes of performance on a point scale (1 = not at all expressive; 5 = highly expressive). This produced a ‘3 expressive intentions × 3 modes of perception’ design. The clips were presented to the audiences randomly, in all permutations across all performers. The results revealed that interpretative differences in expressive intention could be detected, with vision being the clearest indicator.

These results are perhaps as one would expect: vision is the sense through which we process most sensory information (Brainline 2008), and so likely to produce useful perceptual information. Nevertheless, these results, which were of great novelty at the time, highlighted the visual mode of musical performance as a major source of perceptual information for all audience members when assessing performance intention. Using a controlled experimental design, I was able to answer several important questions and draw attention to a whole area of musical expressivity that had previously been neglected in research. While studying violinists did not produce any immediate or direct benefits for me as a vocal performer, observing other players made me much more aware of the issues underpinning the perception and presentation of all musical performances.

Allied to this study, I worked on a number of other projects to examine bodily movement and performance expression. One of these was a collaborative project with Eric Clarke on piano performance (Clarke and Davidson 1998). The goal of the investigation was to understand the degree to which expressive musical effects and bodily gestures were coordinated and whether or not these were tied to structural features of the music. The work produced a state of the art study of the timing variations of a pianist by using a Yamaha MIDI grand piano, which generated data streams capturing both the rate and intensity of key depressions as well as the use of the pedal, thus giving information about expressive timing and dynamics (loudness). Software was then used to transform the relevant key and pedal information into a data stream that could be quantitatively analysed. In addition, the movement pattern of the performer’s head was traced (tracking a specific point every 0.20 seconds) as he moved backwards and forwards during the performances. Any identifiable expressive physical movements/gestures were also recorded, and finally, the performer himself was asked to provide a post-performance commentary on his expressive goals. This particular study of piano playing combined totally objective quantitative measures of the key, pedal and movement tracking data with some semi-objective measures, such as the task of identifying the postural shape and gestural form of the expressive movements, which was left to the authors. While far more subjective than the MIDI and tracking data, these postural and gestural judgements were verified by observer consensus. Finally, feedback from the performer offered totally subjective explanations for interpretative decisions. Although differences were found in the
expressive timing and dynamics, and the movement patterns and gestures across performances, the results were not predictable in that there was not a direct one-to-one mapping between bodily movement, expressive musical devices, and musical structure. Indeed, the implications of the findings revealed to me that we should be cautious and not simply view the body as being under a rigid control. The pianist’s own statements revealed that there were outwardly perceptible and measurable elements of the performance that were not consciously available to the performer. This finding itself offered some reasons why a quantitative and outsider stance can be useful in understanding some issues related to musical practice. The mixed method approach we adopted in this study, which provided a broad perspective on the piano performances under investigation, served good purpose for it demonstrated that by collecting different types of data, different aspects of the performance experience could be captured.

Capturing Internal Reflection: Qualitative Approaches

Since my early research efforts, researchers have increasingly been able to triangulate objective measures with personally reflective comments by audiences and performers (for example, Broughton and Stevens 2009, 2012). Research has since become more interdisciplinary and those researchers like myself who began within strict quantitative paradigms have become better skilled at interpreting reflective thought through the use of qualitative research methods. One discipline grounded in capturing musical experiences through qualitative reflection is ethnomusicology, which commonly uses fieldnotes to report what has happened and when, usually in the form of an episodic diary normally accompanied by detailed reflective notes. The notes, written or in audio and video records, are typically richly descriptive (Kruger, 2008).

While I have been impressed by the detail of the ethnomusicologist’s methodological toolkit, I have never worked under conditions that parallel those of an ethnomusicologist in the field. Early in my exploration of reflective approaches, I tended to use some hard data – usually a filmed performance – for the performers to reflect upon, keeping myself as much in the background as possible. One approach I used in this connection was a ‘talk-aloud’ protocol, where the musicians were encouraged to verbalise their mental processes as they attempted to undertake a musical task and/or as they reflected on that task posthoc, perhaps watching it in a video recording.1

One collaborative project where I used the ‘talk-aloud’ technique involved investigating string quartet practice and performance captured on video (Davidson and Good 2002). While my co-researcher, James Good, and I analysed the video records by identifying behaviours that could be quantified, we also generated qualitative evidence by asking the performers to watch the video footage and discuss their thoughts and feelings on what they were doing, and then comment

1 For more on protocol analysis, see Suh and Trabasso (1993).
on the results they achieved in their rehearsal and performance. While this was not a real-time documentation process and relied on what the performers could recollect, it did provide fascinating insight into the workings of the group; it also offered the players themselves new knowledge about one another and their own processes as they worked. This type of approach continues to be used by practitioner researchers to good outcome (for example, Ginsborg 2002; Ginsborg and Sloboda 2007).

Allied to the ‘talk-aloud’ method, I have also drawn on both informal interviews – a ‘guided conversation’ through which interviewees discuss whatever subject matter they may choose around a given topic (Myers 1992) – and, more frequently, semi-structured interviews. In the latter, while a list of topics to be addressed is prepared by the researcher prior to the interview, the interviewee is also encouraged to expand and provide detailed information on personal experience. The interviewer may then ask additional questions based on this personal data (Davidson 2004a). Interviews may be recorded and later transcribed, or the interviewer may take notes on participant responses. In these qualitative approaches, the researcher develops a deep, personal familiarity with the data and their possible meanings through a gradual process of understanding, and looks for patterns and emergent themes (Bochner and Ellis 1992).

While the examples discussed above show that as my career progressed I actively sought out a variety of approaches to study performance related behaviours, the reflective work cited so far still does not come to grips with the issue of self-reflective practice. It is important to note that when I carried out the research studies mentioned above, I was already a decade into my own academic career, and was at the same time undertaking recital tours as a soloist with orchestras in Europe and directing operas, particularly with companies in Portugal and the UK. Yet somehow, I could not make my own music-making part of my research portfolio. I became frustrated by the fact that my creative work as a musician was never featuring in my own research enquiries, even though my research was driven, ironically, by questions emerging from my own musical practices. These tensions peaked when I wrote a well-cited paper on expressive body movement in vocal performance (Davidson 2001). This paper began positively for me in that it included a critical reflection on my own practices as a singer, looking at the various roles I was occupying in the performance space; through this process I was able to identify a theoretical framework for broader analysis. Yet, the larger scale work still focused on the performances of someone else! At that point, I still felt that I needed to focus on another artist in order to be able to give objective theoretical accounts, which I did not think I could achieve if I focused on myself. Consequently, the main focus of the enquiry became an analysis of a performance by the pop singer Annie Lennox. This paper turned out to be a watershed, for I also knew that as a musician I wanted and needed to approach my practice critically and inventively through research, but finding a route to have the confidence to do this was very testing.
Throughout those years, I failed to connect with my colleagues in ethnomusicology, who already had a strong tradition of practitioner-researchers in their discipline. These researchers attempted to gain understanding of musical culture by learning to play and participate in the music and then reflect on their experiences. First advocated by Mantle Hood (1960), who labelled it ‘bi-musicality’, this approach was picked up and developed by John Baily, who preferred to use the term ‘intermusability’ (2008).

John Baily devoted himself to understanding musical practices outside his native cultural experience by becoming a skilled player of the Herati dutar, a plucked lute-like stringed instrument from Afghanistan. Through learning the instrument, the structure of the music was apprehended operationally, yielding data about the music and the culture that Baily could not have accessed using another technique. By focusing on the research value of intermusability, he opened a broader discussion on the ways in which musicians might explore their own performances and reflect on them. Through the use of fieldnotes and video evidence to analyse and understand his own processes, Baily revealed how we might gain useful insights into performance practice, the ergonomics of playing, the cognitive mechanisms underlying the playing and above all, the social circumstances of musical practice. In fact, Baily’s work reflected what I was undertaking in embryonic form when I created a preambles to my analysis of a performance by Annie Lennox. Ironically, it was by observing performer-researchers from outside of my own academic discipline of music psychology that I was able to reflect on how they could engage in practice-led research, and felt that I was increasingly going to be able to draw together my academic and practitioner experiences.

Finding a suitable methodology to undertake practice-led research meant that I needed to be appraised of all kinds of potentially applicable frameworks. For me, autoethnographic enquiry provided one of the most extreme forms of self-reflective work. An example of this approach from Brydie-Leigh Bartleet’s work (2009), which explores her own experience as a conductor, gives a taste of the level of reflection employed. In essence, she offers a deeply reflective insight into her practice as a creative artist. But, more than this, she discusses the theoretical underpinnings of autoethnographic approaches in music research. Here is an indicative example of her reflective narrative:

“Okay people, let’s set up”, I shout. A few people move, but others ignore my request. They slowly gravitate to their seats and get themselves ready. As the clock hits 6 p.m., I clap my hands loudly and then leave one arm in the air. The noise and rumble slowly starts to die away. “Good evening everyone, B-flat concert scale, long tones, thank you”. I step up to the podium and pick up my baton and gesture them to begin. I’m thinking and listening. “Their entries are slack, they’re not breathing together, their tuning is atrocious, the balance is all wrong”, my internal dialogue begins saying. When we get to the end of the scale, I’m thinking about what to say. They put their instruments down and look up, waiting for me to comment. “How would you rate your tuning?” I ask. They
all grumble in reply. “Use your air, sit up straight, switch on, let’s try it again”,
I encourage. (Bartleet, 2009: p. 722)

It is after giving such thick narrative descriptions of her conducting experiences
that Bartleet begins to unpack what she can do with this information. She ends
the piece by explaining how this detailed account has helped her to gain insights
into her own practice. Often, an ‘epiphany’ of this kind becomes central in
autoethnographic enquiry (Bochner and Ellis 1992; Ellis et al. 2011). For Bartleet,
the highly personal but detailed account of her own practice offered insights to
develop her conducting: processes of reflecting and writing were influential in
shaping her future practice.

Insights similar to those offered by Bartleet were being developed slowly,
somewhat tentatively, in my own writing about my role as an opera director
(Davidson 2004b, 2007). While I was adding new insights to my research palette,
making the shift away from my familiar empirical methods was not easy, especially
because quantitative and qualitative empirical work, as exemplified in this chapter,
can be effective and lead to understanding about what performers do.

**Practice as Research**

By the time I wrote about my opera directing in 2007 (Davidson 2007), it became
obvious that the only way I was going to engage effectively with the emergent
practice-as-research movement was to find ways of exploring how real-time
reflective actions and critical decisions I made as my practice unfurled led to
immediate change. Indeed, this approach became a working definition of ‘practice
as research’ for me.

**Composition Project**

The case I shall now describe comes from a project that encapsulates what I have
come to recognise as practice as research. Ironically, the project is not about me as
a performer, but rather emerged as I assisted a colleague to find a way of fulfilling
an external requirement. The university syllabus demanded that composition
students should write an exegesis to complement their practical work. In it, they
were asked to outline the research underpinning their creative practice. The senior
composer brought me into the teaching room to see what we could develop as a
tool to aid the students in producing appropriate materials for this requirement, and
also to assist more broadly in finding a technique for the development of creative
research in their context. In effect, I became a facilitator for the composers to
undertake practice as research.

The approach was pragmatic. We began by simply exposing the topic and
exploring ways in which we might investigate their practice. During our first meeting,
which took place as a focus group discussion, it became apparent that besides wishing
to generate a useful exegesis on their creative research, all the composers were also interested in understanding how their creative thought processes developed over time; for example, why one compositional decision was made over another.

Based on this reflective collaborative exercise, it was decided that it would be useful to assess practice by keeping work diaries and notes to access individual process. However, all participants noted that there would be some mental processes they simply could not consciously access; hence, they thought it would be useful to develop a qualitative empirical study, in which the different composers would compare their approaches and ideas to see if and where there were gaps in one person’s knowledge base that could be supplemented by knowledge or experience from another.

This emergent, practitioner-led approach represented an instance of practice as research, but it was not an original method. Broadly identified as ‘action research’, it had a significant history in social science research. Used in contexts where practitioners aim to improve or modify their practice, this method follows a cycle of research planning, acting, observing, and reflecting. During the planning stage, the participant researcher identifies, organises and uses relevant materials to inform their actions. They then ‘act’ by trialling, collecting and questioning what they have planned. Then, they ‘observe’ by analysing, reporting and sharing their outcomes, which in turn leads them to ‘reflect’ by evaluating, revisiting and then implementing change, eventually returning them to the start of the action cycle (see Figure 5.1).

The appeal of the approach is that it is focused on both understanding and improving one’s own practice. It offers a method of identifying artistic/creative processes that is flexible enough to suit every case and can be applied to an individual or a group. While the method comes from the same base as reflective enquiry through its use of inductive reasoning, it can also supplement reflections with real-time observation as well as recordings of creative processes, enabling interpretations based on patterns of action and the triangulation of several data sources.

The composition project lasted five weeks and produced five compositions, five sets of accompanying written diaries and musical notes, and some sound recordings of the composers talking through, in real-time, what they were attempting to achieve creatively. Analysis of these data revealed some detailed insights. Indeed, the head of composition was able to see ways of structuring his lessons and developing an exegesis model that he could not have imagined without these detailed explorations of creative processes and outputs. The techniques involved in action research can be easily learned and applied in different practice as research contexts (Greenwood and Levin 1998; Nolfke and Somekh 2009; Reason and Bradbury 2007; Stringer 1999).

As the current chapter has unfolded, I have gradually moved from quantitative studies through to qualitative enquiries, and on to action research designed to foster the agency of change, which is essentially what one does in practice as research. At this point, I feel it appropriate to draw the reader’s attention to two final examples of work that I consider to sit within the definition of practice as
Figure 5.1  The action research cycle in which practitioners gain insight into current practice and trial ideas for change. Adapted from State of New South Wales Department of Education and Training, Professional Learning and Development Directorate, Action Research in Education Guidelines (2010, p. 3). Reproduced with permission of the New South Wales Department of Education and Training.

research: in both cases, the authors were practitioners engaged in creative practice, but they were also investigating the applicability of specific theoretical ideas to understand how their performances were developed and delivered.

Process and Product: Applying Theoretical Modelling

Piano duos
Viney and Grinberg (2014) created a performance research project founded on Edward Cone’s (1968) notion that good concert programming is a critical act, the juxtaposition of works in a concert enabling each piece in the programme to influence the audience’s perception of its neighbours and companions. Their work involved practicing for and performing a duo recital as part of the Piano Spheres Series at the Colburn School, Los Angeles, in 2011. The emergent programme, exploring Cone’s notion, included works by György Kurtág, Henri Dutilleux, Witold Lutoslawski, Pierre Boulez, Peter Maxwell Davies, Shaun Naidoo and
John Adams, Viney and Grinberg’s central research question was how best to achieve a dramatic musical narrative through programming order to stimulate the audience’s critical engagement and reflection on the works performed. Specific areas of interest towards achieving this goal were how the musical and social dynamics contributed to facilitating artistic thought and practice. Although the project was not experimental in a traditional sense, the performers experimented with the dynamic flow and ordering of repertoire. In order to capture and document this process, they chose to juxtapose a theoretical idea against a piece of musical evidence, illustrating each example discussed with a video clip. This procedure afforded a detailed working practice, facilitating results related to both process and outcome.

The project reflected the duo’s collaborative processes of social dynamics, exploratory listening, interdependence, and complementary work. For example, *Flowers, We Are, Mere Flowers...embracing sound* by Kurtág was selected to begin the recital with both players on one stool, the ‘embrace’ of Kurtág’s title being explored through the proximity and overlapping nature of the performers’ bodies as they created the musical sounds. An additional significant element of the research was the application of several theoretical ideas about collaboration: the concert program was used to illustrate how the duo—a married couple who had worked together professionally for 10 years—played out, through the musical materials, their expressive musical ideas and demonstrated their interpersonal coordination.

The second example I explore relates to a project in which I have been involved as a researcher and practitioner. Other similar projects have been reported (Davidson 2004b, 2007), but this one differs from these in that it was a historically informed opera production where I was assistant director.

**Opera production: Monteverdi reclaimed**

The project focused on the process and outcome of a production of Monteverdi’s *Orfeo* which took place in 2011. While the historically informed performance of baroque music has been a key area of scholarship since the 1970s, work that combines knowledge of the period in terms of both musical and staged action is rare. The motivation for this project was the desire to employ knowledge of the early seventeenth-century musical and stage etiquette to achieve the period goal of ‘moving the affections’ of the audience. An evidence-based quasi-experimental approach to the process of rehearsal, with a resultant opportunity for feedback, provided essential context for the final performance output.

With their own interpretations of period treatises on music and rhetoric, the members of the production team (including myself) acted as the possessors of historical knowledge during rehearsals. Our job was to translate this knowledge into meaningful experience for the performers, and the rehearsal process explored practical means for the performance company to acquire this historical knowledge. Detailed video records and participant-observer notes (kept by me, as assistant director) revealed how the production team directed the project, offering simple exercises to incorporate ideas taken from historical treatises and bringing concepts,
Engeström’s activity system model applied to the opera project under examination, taken from Davidson (2014) based on a model presented by North and Hargreaves (2008, p. 324).

which would have been familiar to seventeenth-century performers, to life for the current cast. Data were systematically viewed and qualitatively reported by me. The performance itself was reflected upon by all participants including the audience.

In many ways the processes of research in this project were not very different from those employed in Viney and Grinberg’s work, or those undertaken by the composers. In this case, however, a theoretical model – cultural-historical activity theory – was applied to the context of both the process and output of the opera production to demonstrate that the practice at the core of the research project is not only concerned with intra-musical issues, but is the result of a collaborative activity based on shared cultural tools – language, music, and material artefacts such as books or musical instruments.

Engeström’s activity system theory (1987) offered a tool to identify interacting relationships within the opera production project. Figure 5.2 shows how I applied it to the particular production under discussion (Davidson 2014). The upper portion of the triangle contains a subject, in this case the company (singers and instrumentalists) brought together to perform the opera. The object is the production of Monteverdi’s opera Orfeo. The mediating cultural tools include the score and the musical instruments. The lower portion of the triangle describes other key elements in the interaction: community, rules and division of labour. In my example, these are identified as follows: rules indicate the historical performance practices to be learned and applied, as well as existing knowledge/rules about music and performance; the community refers to the production team who work
with the performing group to realise the object (the performance of Orfeo); and finally, the division of labour refers to the interaction between the opera company and production team who work with the mediating artefacts, and rules. In this model, the activity occurs around the object to produce a final outcome.

The application of this model enabled us as a team of practitioners to reflect upon various ‘active’ operations as we worked on production. While not a necessary component of reflective practice as research, the model certainly facilitated an understanding of how themes intertwined and how certain practice behaviours influenced one another.

Conclusion: Social Science Models, A Future for Practice as Research

In this chapter I have reflected on my personal engagement with research into and through practice. I have offered examples of social science approaches I employed or am familiar with in order to provide the reader with an overview of the range of available approaches. The reader is free to accept or dismiss these frameworks as more or less useful, but there are several points worth emphasising. Firstly, music practice studies are broad ranging and are in a continual process of refinement and development; consequently, there is ongoing scope for researchers to develop new methodological approaches. Secondly, the research question presented, and the desire to explore causation or the phenomenology of some form of music practice will in large part determine which specific research techniques are most appropriate. Thirdly, I have learned much over the years, and one of the most powerful lessons is that there are many different ways to achieve understanding in and about practice: in addition to the skill of performing, having the capacity to use multiple methods, to consider broader theoretical contexts, and to document, analyse and reflect on data can only enhance one’s potential for new knowledge and insight.

References


