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Examining the music doctorate: challenges, contradictions and confluence in assessing time-based work

Abstract:

Time-based work presents particular challenges for the assessment of doctoral work. The need for performance to be experienced 'in the moment' creates logistical issues for institutions, assessors and, most significantly – candidates. While this process is akin to examining an exhibition, the ephemeral nature of music, the balance of process and product and the subjectivities of the examiners all play a role in the eventual outcome. Drawing on cases from practice-centred work in music, this paper seeks to illuminate examination practices. Using both live and web-based submissions and incorporating the views of examiners, candidates and higher degree managers, the paper reveals some of the positive and the not-so-positive experiences of examination. The cases are located in the Australian context but have been subjected to international scrutiny through peer assessment with partner institutions in Europe and Scandinavia. The findings from the data provide potential templates for future use, alongside identification of pitfalls to be avoided in the assessment of high stakes music doctorates.

Biographical note:

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Keywords:

Creative arts – Doctoral degrees – Examination – Assessment – Music doctorates

Background

The repercussions of the melding of the practice-centred conservatoire with the university setting are still evident in the higher education sector. Schippers comments on this in the following way:

Many would regard the union of conservatoires (or schools of music) and universities as a marriage of convenience: the bride beautiful, artistic, but without means; the groom perhaps a little dull, but a stable provider (2007: 34).

While undergraduate funding models in this environment are constantly under scrutiny, issues of curriculum and assessment have largely been addressed at the undergraduate level. In the research degree space, however, there remain a significant number of issues related to what Draper and Harrison describe as a 'force-fit arrangement in relation to research, where the arts are expected to comply with the eye of the science needle' (2011). These contradictions and expected binaries present challenges for music institutions. Similarly, Hannan commented on 'a number of problems relating to awareness of doctoral award requirements across the sector, and acknowledgement and understandings of academic and artistic standards' (2008: 1). This situation is not restricted to the Australian setting. The Polifonia project in Europe determined that:

It would seem logical to be able to research and communicate about music in all circumstances and from all aspects within the institution that deals most specifically with it and by those people who are executants, rather than confining this activity to those institutions that happen to offer musicology as a scientific study field (Polifonia 2007: 9).

The force-fit arrangements have lingering policy hangovers. Many Australian universities still have policy restrictions that expect 'a final, self-contained exegesis be submitted for external examination at the end of candidature' (Draper & Harrison 2011). Draper and Harrison posit that that irrespective of these challenges, music researchers should continue to push the boundaries in assessment and pedagogy so that parity with other forms of research and research training can be achieved. Using the 'through the eye of the needle' analogy is particularly apt for practice-based music doctoral candidates in the pedagogy and examination processes. Pedagogical concerns in higher degrees have been addressed in earlier papers by this author (Harrison & Emmerson 2009, Harrison 2010, Harrison 2012). However, these papers largely focus on student and supervisor interactions in the midst of the degree, and a gap exists in relation to the point at which the rubber hits the road – the examination. Using an illuminative case study approach (Stake 1995) and drawing on three case studies of live and web-based submissions to explore some of the matters that arise in assessing practice-centred work, this paper therefore addresses two central issues: a) What does a doctorate in music look (sound) like?; and, b) What are the challenges in assessing a doctorate in the arts?

Examining the music doctorate

Examinations in doctoral settings in music can take a number of forms. The PhD by

composition has a long history in the academy and, because it uses a text-based artefact, it is somewhat different from the performance-based doctorate. The PhD by performance has not yet claimed a legitimate space in the Australian research-training climate, despite the advances made in recognition of creative outputs through the Excellence in Research (ERA) exercise (ARC 2010).

Principally, doctoral submissions in music fall into three categories: text-based dissertation; music (performed or composed) plus exegesis or framing statement; and, digital presentation of media, music, text, images etc.

Text-based dissertations, it could be assumed, have relatively little about them that are contentious. However, even text-based dissertations can deal with contentious issues, or be presented in non-traditional ways. This is commonplace in creative writing dissertations, of course, but it is also increasingly so in dissertations in other creative domains.

In the second category, where complex new interrelations between music and text are presented, one of the major issues pertains to weighting and balance. It could be argued that when an exegesis is included the representation of the music requires analysis and explanation. This tends to take the form of traditional text-based music analysis, or the use of musical examples to illustrate the text. In the case of a framing statement, the submission relies on the music itself as the central aspect of the doctorate, but the way in which it is contextualised becomes critical. In some cases, this can be as little as a few pages while in other cases a more comprehensive section on 'how to read this submission' is required.

The final, and perhaps most innovative, form of submission comprises the non-linear interface of representations. This process has a clear alignment with the literature on practice-centred research. That term, used in relation to music by Harrison (2012), is borrowed from other disciplines (Woods & Christoffersen 2001, Rust, Roddis & Chamberlain 2001) and, according to these writers, allows for 'new forms of knowledge dissemination'. In these instances, the submission is not necessarily linear and it serves to ensure that the practice itself is assessed. The fluidity of organization (Antonacopoulou 2007) facilitated through digital formats acknowledges and celebrates ambiguity, uncertainty and discontinuity of epistemological concerns (Clegg et al. 2005).

Assessment of any of these forms of submission relies on examiners' perceptions of what constitutes academic research. The definition of research in the creative arts has been the source of significant conjecture in the recent past. In 2010 Borgdorff and Schuijer posited that:

Art research begins by addressing questions that are pertinent ... Researchers employ experimental and hermeneutic methods that reveal and articulate the tacit knowledge that is situated and embodied in specific artworks and artistic processes. Research processes are documented and disseminated in an appropriate manner to the research community and the wider public (53).

The main tenets explored here are that the work is located in the artistic setting, the tacit knowledge and processes are articulated, and that dissemination is suited to the

context and audience for which it is intended. The OECD view of research concurs with this definition, indicating that research may include 'creative work undertaken on a systematic basis in order to increase the stock of knowledge, including the knowledge of man, culture and society to devise new applications' (OECD Factbook, 2006).

With this view of academic research in mind, Newberry (2010) contends that there are similarities for doctoral research, though distinctions come into play when pedagogical and assessment regimes are considered. The Association of European Conservatoires has already grappled with these issues in the doctoral space, suggesting that:

all research follows this sequential pattern of Question-Investigation-Documentation. What distinguishes artistic research is the way in which artistic experience, artistic knowledge and skills as well as artistic goals are involved in research (Polifonia 2007: 27).

The British Research Assessment Exercise (RAE) experience demonstrated that this was not straightforward, and acknowledged that 'in the less mature subject areas ... the intellectual infrastructure of the discipline may still be being built' (RAE 2008: 21). This lack of maturity creates anxiety for institutions. As Candlin remarks: 'Like any other PhD, practice-based PhDs are also the focus of much anxiety but, significantly, those anxieties reach beyond personal doubt and are often shared by supervisors, examiners and senior academic management' (2000: 1). Furthermore, Bresler comments on the 'temporal, polyphonic nature of scholarly engagement and meaning making' (2009: 8) in music and notes the significant problems associated with in the moment music-making and research data generation.

Ultimately, these concerns can only be mitigated through a return to the basic principles of research – validity, reliability and generalisability. In artistic terms, this relates well to the literature in artistic practice cited above: can the research be *articulated through argument* (Newberry 2010), and is it *sharable* (Borgdorff 2007) and *accessible/transparent/transferable* (Mafe & Brown 2006)? The challenges for assessing practice-based doctorates, particularly those where real-time or live performance is incorporated represent significant demands on the academy, and real risks for the students involved.

Method

To explore the challenges of assessing time-based work, an illuminative case study approach (Stake 1995) was employed. The cases are designed to elaborate on the broad issues raised above regarding the ephemeral nature of music, the balance of process and product and the subjectivities of the examiners. The examples seek to illustrate the extent to which the projects were *articulated through argument*, *sharable* and *transparent*. All three examples are located at Queensland Conservatorium Griffith University (QCGU) in Australia. Prior to the establishment of the school's research centre in 2004, the Master of Music was the only practice-based option until the Doctor of Musical Arts (DMA) was introduced to operate alongside the existing

PhD in 2005. This offering expanded QCGU's research training offerings, and the program's design is structured to provide one third research training coursework and the remainder as traditional supervision. The nature of the candidates, their backgrounds and aims, and how they view their practice-led investigations are central to ways in which they are taught and examined. The examples below draw on cases from the PhD, DMA and Master of Music. Examiners for the DMA are provided with the information in the Appendix relating to the degree and the assessment process, including details of the three broad categories of appropriate submission formats: written thesis, portfolio of creative work/research materials with a written exegesis, or submission entirely in the form of a CD-ROM, DVD or website. A sample examination form is also provided in the Appendix.

Illuminative case studies

Ralph

This project is essentially a PhD by composition. Its presentation format, however, is web-based with video extracts, score examples, recordings and substantial text. It uses autoethnography as method, so it is deeply personal but also connects the self with relationship to others. Autoethnography, described by Maréchal as 'a form or method of research that involves self-observation and reflexive investigation in the context of ethnographic field work and writing' (2010: 43), is employed by a number of QCGU researchers and research students. This particular project uses the more narrowly defined 'insider ethnography,' referring to studies of the (culture of) a group of which the researcher is a member (Hayano 1979). It is not without its critics: as Denzin and Lincoln note, many quantitative researchers regard the materials produced by so-called 'the softer, interpretive methods' as 'unreliable, impressionistic, and not objective' (1994: 5). Herein lies the risk for the candidate. It was important therefore that the compositions (in both score and performed format) were represented. It draws on the work of Emmerson (2007), in which scores, performances, text and video commentary are provided on Mozart's Rondo in A minor K.511.

The home page represents introduction, folio, position, rationale, method, principles, case study, conclusion and repository as the main menu bar. This is not unlike the table of contents in a text-based dissertation. The central concern in this instance was for the composer's voice to be central in the submission. Video was used as the primary tool, as exemplified in the Acknowledgements section (see Fig. 1). The user can read a transcription rather than watch the video, but this is a secondary way of viewing the work. This becomes more important as the compositions are presented – live performances of the work accompany score and video commentary. This work represents a close alignment of a creative work to a doctoral dissertation in the ERA climate. There is a synopsis, recording, reviews etc. Some sections of the website are presented purely as a written document, as is the case with the rationale (see Fig. 2).



The Work of Ralph Hultgren - Why Do I Compose



Text accompanying the video

Acknowledgments

As I sit here and ruminate over those who have contributed to this thesis I am taken by the scope of involvement by others.

Commissioner

I consider those who have contributed through commissioning, performing and also the listeners to my music. Their individual contributions are noted in the synopsis of each work, as and where appropriate. I will draw attention to just a few of the commissioners to give focus to the commitment that has been given by individuals and organisations.

Fig. 1. Hultgren acknowledgments

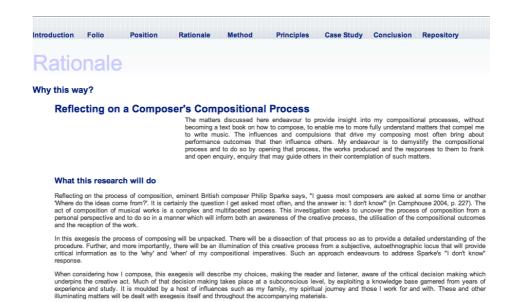


Fig. 2. Hultgren rationale

In all, the thesis presented more than a collection of scores with accompanying exegesis could do. This was a PhD, rather than a DMA, but the examiners understood that this was largely a composition doctorate following the tradition of paper-based scores and commentary but presented in a media-rich format to enhance and position the work. The results – near perfect scores!

Colin

Colin's project reflected on aspects of Asperger's syndrome and the creative process. Like Ralph's project, it employs aspects of autoethnography. Also presented in a web-based format, the project allows for semi-linear approaches, and frames the study with a video introduction rather unsubtly entitled 'please don't ignore me'. In other respects, the introductory page does not look unlike a traditional table of contents (see Fig. 3). This was felt to be necessary in order to ensure the appropriate balance was achieved between text-based elements and creative output.

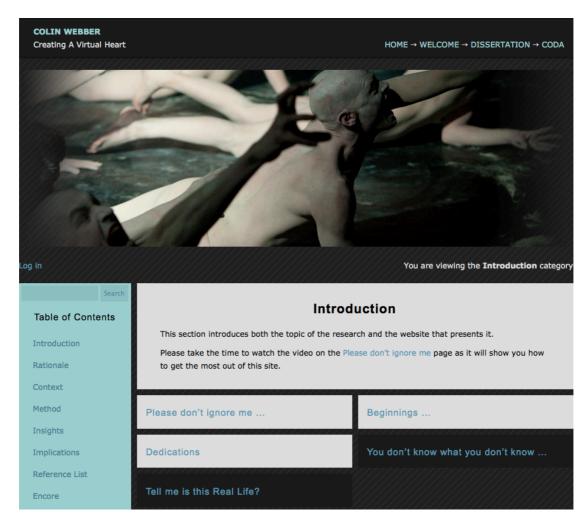


Fig. 3. Creating a virtual heart, at http://colinwebber.com

The main 'dissertation' is presented in two voices — one with analytic elements on white pages and one more evocative on black pages (see Fig. 4). While it could be argued that this creates a binary, it is not unusual to see this dual voice in other forms of research, particularly in creative writing. There is also a 'note to academics' that helps to frame the study, which reads, in part:

This site represents my Thesis for Doctor of Musical Arts at Griffith University in Brisbane, Australia. But it is more than that. The 'frozen' version of the site, dated August 2011, is held by the Australian Digital Thesis program and in the Griffith libraries; however this version continues to live.

As indicated in the dissertation itself, the site now is open for commentary. The pages themselves will not change, but comments will be displayed. In addition, the original 'appendices' section of the dissertation, which contained elements for assessment including confidential documents and copyright permissions, has been replaced with an 'Encore' section where additional material will be added.

I hope that my approach to the research via autoethnography, and the presentation of a 'way of thinking' through the media of text, image, sound and the hyperlink gives some clues into the ways in which a mind can work.

To these various ends, the presentation takes the form of a semi-linear multimedia document based in Web technologies, incorporating both evocative and analytical text, images and photographs, music, audio and video material where these elements are presented as integrated data rather than merely illustrative or ancillary (at http://colinwebber.com, accessed 30 August 2013)

Part composition DMA, there are also a number of theatre-related works in which the visual representation was integral to the creative product. Web-based formats gave voice to this feature.

Creating a Virtual Heart

Arts practice with a defective mind

I am a composer, and this study documents an individual perspective on two very personal, and almost inseparable themes – a musical life and the impact of Asperger's Syndrome – upon it. Asperger's Syndrome is a pervasive developmental disorder on the Autism Spectrum with which I was diagnosed in 2005. By their very nature these themes are strongly loaded with personal subjectivity, bias and experiences that are normally hidden within the individual. The resulting analysis of this effects first, foremost and strongest, the researcher and composer himself (myself) and offers a window through which the reader may glimpse another reality. These themes are explored via autoethnography, telling stories, observing the self. Autoethnography is quite new in the field of music research, perhaps reflecting the great fear that many musicians seem to have of losing their mysterious powers to the spotlight glare of research.

This document, the product of five years of interdisciplinary work in Griffith University's Doctor of Musical Arts program, constitutes an innovative approach to a subject that is not well represented in the literature on either music or autism.

To these various ends, the presentation takes the form of a semi-linear multimedia document based in Web technologies, incorporating both evocative and analytical text, images and photographs, music, audio and video material where these elements are presented as integrated data rather than merely illustrative or ancillary. I have used a combination of table of contents, designated related posts and relevant links generated by WordPress designed for active web-server operation. The text is divided into "analytic" white pages, and "evocative" black pages, the first of which appears to the right of this column, thus presenting two complementary "voices" in the study. Post-assessment the website has become live on the Internet, a "living document" in a format that allows and encourages commentary and interaction, and could itself become a source for further investigation.

Every Head is a World

Dear Reader

Welcome to my world. I am the Other, and it is the world in my head that I invite you to explore. I am a musician and composer and I have Asperger's Syndrome, a condition on the Autism spectrum of disorders. According to the criteria for diagnosis, I am impaired, I lack, I have failed to develop, and my behaviour is inappropriate.

Apparently, I have a defective mind.

I do not consider myself defective, and I use the term ironically in the title of this thesis, but Asperger's Syndrome makes me differen to you in ways that you may not see easily, in ways that I did not fully know or understand, before undertaking this doctorate, but these differences are not so rare that you will not recognise yourself.

What is it like to be someone else, to think like someone else, to make music like someone else? Conventional wisdom suggests that the more similar the Other is, or the more familiar, the more possible it is to imagine and understand their world and to call on that spontaneous understanding of the perspective others that is known as Theory of Mind. We are exhorted to "walk in the other man's shoes" and enter the world in their head, to have empathy and sympathy for others as a part of being moral human beings.

To do this we rely on a combination of observation and assumption. If the Other is similar to us, perhaps they will experience and respond to situations in a similar way. But if the Other is different, the relationship is more difficult because there are less common experiences. Cultural differences may generate false assumptions, as may gender and sexuality, education, language and experience, but we can negotiate this by observation and through first hand accounts of the Other's experience, modifying our assumptions and making allowances for a wider range of possibilities.

In this study I have offered my first hand experiences, my music, my thoughts and my visions. I have tried to present them using the multiple layers and links of this website as a reflection of my own

Fig. 4. Dual-voice narratives in Creating a Virtual Heart (at http://colinwebber.com)

Toby

This project was presented as a blog related to a Master of Music degree. It contains the dissertation and 'all of the bits that couldn't fit in the dissertation.' Originally it was intended that this blog would be the dissertation, but the university policy at the time did not allow submission in this format.

The student's blog states that the 'research is intended to be read in a non-linear fashion'. This allows the reader to explore the research through various interrelated posts that appear in chronological order, searchable through categories. It is also possible to read the complete dissertation 'in order'. Some posts were password protected for ethical reasons (see Fig. 5).

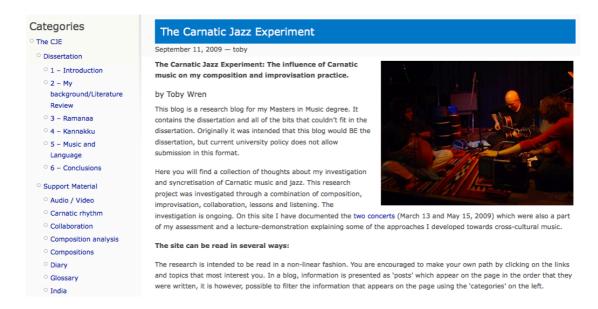


Fig. 5. The Carnatic Jazz Experiment

Discussion

From the point of view of institutions, several concerns emerge. In particular, as Harrison points out, 'the one qualification you need to *supervise or examine* a doctorate is to have done it yourself' (2012). The responsibility for training examiners rests with examiner's home institution, yet the examination requests come from outside the institution. A further complication is the idiosyncratic expectations of the examinee's institution and potential subjectivities that examiners bring to the assessment process. This is, of course, a problem in other forms of assessment too, but perhaps the stakes are higher in the doctoral setting and where wholly summative time-based work, gone in the blink of an eye, comes into play. The web-based submissions above go some way to mitigating this concern; however, in relation to the university guidelines stating that audio/video recordings should be provided in cases where live performance is included in a portfolio¹, it should be noted that a recording of a live performance is not the same as the live performance itself.

A second concern relates to the location of sympathetic assessors. This is not to imply 'easy' markers but rather those who bring an understanding of the process. Given the

relatively recent introduction of practice-centred doctorates and the ongoing discussions (and regional variations) on the precise nature of artistic research, this situation can be further exacerbated. In the examples presented above, each included a section on 'how to read me'. The framing of the doctoral submission is complicated, but it serves to assist the candidate and the examiner in setting up the lens through which the work should be assessed. It also enables the candidate to display ability to 'position themselves within their field of expertise with authority', one of the attributes required of graduates as per the university guidelines (see Endnote 1).

Two relatively minor concerns relate to the technical considerations and logistics of live performance and digital submission; and the adjudication of disparate marks post-examination. Technical issues can usually be resolved with relative ease with competent and reasonable graduate schools. Lack of agreement by examiners is more problematic when a live component is involved. This can sometimes be managed when an odd number of examiners are involved in the assessment, or when an examiner is specifically appointed in an adjudicating or deliberative capacity.

Conclusion

Despite these advances, supervisors, students and examiners are aware of the risk at the point of examination. This is supported in the literature:

We negotiate our project together and that's what I find the most challenging part. It's actually standing up as a supervisor and being accountable for that innovation with the student... That's what I feel personally is the largest challenge, is taking that risk with the student as a supervisor, it's a huge step (Harrison & Emmerson 2009)

This paper sought to addresses two central issues: a) What does a doctorate in music look (sound) like?; and, b) What are the challenges in assessing a doctorate in the arts? From the examples presented, while there is great variation in form of presentation and the content, the extent to which doctoral work is *articulated through argument, sharable* and *transparent* is evident. Of particular interest is the scope of dissemination made possible through web-based dissertations. The impact of work (considered an important aspect of research status) can be far greater in this format than in a bound volume sitting on a library shelf. The emphasis on sound as the medium for answering research questions is also evident in the cases, none more so than where video is valued over written text. Music has been slow to embrace some of the potentialities of new media, particularly when one considers that Eisner demonstrated that the forms we use to represent what we think (literal language, visual images, number, or poetry) have a huge impact on how we think and what we can think about (1997).

This paper has only presented three cases from one institution, so ironically the generalisability of the claims made could be questioned. The works presented have been subject to international scrutiny through the examination process, and the graduates have taken (or maintained) their place in the world of academia as 'doctors' and high-level practitioners. In these cases, the examination process was relatively smooth, but only because the pedagogy employed urged students to consider the

importance of framing their work, arguing their stance and disseminating in appropriate forms. Assessment and pedagogy cannot be divorced from each other, and in these instances, the marriage of art and academia produced both products and people who recognised and overcame the substantial risks to present work of a high order. The institution from which the candidates come has embraced new approaches to pedagogy and assessment at all levels, and is in the process of creating affinity spaces (Gee 2004) in which the confluence of art and music can continue to be celebrated.

Endnote

1. Doctor of Musical Arts (Griffith University)

About this program

This professional doctorate will provide musicians with extensive experience the opportunity to upgrade their skills and qualifications through research based on their practice. The following specialisations will be offered: 1. Performance; 2. Technology; 3. Composition; 4. Teaching and Learning.

Career opportunities

Graduates of the Doctor of Musical Arts program will be able to:

- · position themselves within their field of expertise with authority
- apply the skills gained to similar contexts
- conceive, initiate and conduct substantial artistic research projects independently
- provide leadership and authoritative feedback to research of others

(at http://www14.gu.edu.au/cis/p_cat/admission.asp?ProgCode=6017, accessed 30 August 2013)

Research component

The research may be presented in one of the following formats:

- 1. a written thesis (60-80,000 words)
- 2. OR a portfolio of creative work/research materials with a written exegesis that contextualises the work and its contribution to the field (minimum 20000 words). The size of the written exegesis may depend upon the scope and nature of the other research materials. These materials may include but are not limited to the following:
 - scores
 - o audio/video recordings
 - o reflective commentaries or journals
 - video or transcripts of interviews
 - o other relevant supporting material demonstrating professional practice in action
 - in cases where live performance is to be included in the portfolio, audio recordings (and if possible video recordings) will be provided and these will be supplemented by reports from examiners who experienced the performances live
 - some or all of these creative work/research materials may be submitted in integrated digital formats such as CD-ROM, DVD, USB stick or self-contained website on disk.
- 3. OR in lieu of the format options above, submission entirely in the form of a CD-ROM, DVD or website is acceptable especially if the use of digital technologies has enabled an effective integration of the exegesis with score, sound and video image. As with the portfolio option, the extent of the exegesis may depend upon the scope and nature of the other research materials.

(at http://www14.gu.edu.au/cis/p_cat/require.asp?ProgCode=6017&Type=require, accessed 30 August 2013)

Examiners' Report form

A sample Doctor of Musical Arts Examiners' Report form is available at $http://www.griffith.edu.au/__data/assets/pdf_file/0018/184302/DMA_Ex_Summary_Sample.pdf$

Works cited

Australian Research Council 2010 ERA national report, at http://www.arc.gov.au/era (accessed 29 August 2013)

Antonacopoulou, Elena P 2007 'Practise-centred research', in R Thorpe & R Holt (eds) *Dictionary of qualitative management research* London: Sage, 165–69

Borgdorff, Henk 2007 'The debate on research in the arts' Dutch journal of music theory 12: 1, 1–17

Borgdorff, Henk & Michiel Schuijer, M 2010 'Research in the conservatoire: exploring the middle ground' *Dissonanz/Dissonance* 110 (June), 14–19

Bresler, Liora 2009 'Research education shaped by musical sensibilities' *British journal of music education* 26:1, 7–25

Candlin, Fiona 2000 'A proper anxiety?: practice-based PhDs and academic unease' *Working papers in art and design* 1, at http://sitem.herts.ac.uk/artdes_research/papers/wpades/vol1/candlin1.html (accessed 29 August 2013)

Clegg, Stewart R, Martin Kornberger & Carl Rhodes 2005 'Learning /becoming /organizing' *Organization* 12: 2, 147–67

Draper, Paul & Scott Harrison 2011 'Through the eye of a needle: the emergence of a practice-led doctorate in music' *British journal of music education* 28:1, 87–102

Denzin, Norman & Yvonna Lincoln (eds) 1994 *Handbook of qualitative research* Thousand Oaks, CA: Sage

Eisner, Elliot W 1997 'Cognition and representation: a way to pursue the American dream' *Phi delta kappan* 78, 348–53

Emmerson, Stephen 2007 Around a rondo: preparing Mozart's rondo in A minor K.511 for performance on fortepiano (2 DVD set) Brisbane: Queensland Conservatorium Research Centre

Gee, James 2004 Situated language and learning: a critique of traditional schooling New York: Routledge

Hayano, David 1979 'Autoethnography: paradigms, problems and prospects' *Human organization* 38: 1, 99–104

Harrison, Scott & Stephen Emmerson 2009 'The challenges of supervision of a doctorate in practice-based research in music: perceptions of students and supervisors' *TEXT* 13: 2, at http://www.textjournal.com.au (accessed 29 August 2013)

Harrison, Scott 2010 'A journey from supervisee to supervisor', in D Forrest (ed) *Journeying:* reflections on doctoral studies by Australian music educators North Melbourne: Australian Scholarly Publishing, 84–98

Harrison, Scott 2012 'Letting go: an autoethnography of supervising the research higher degree in music' *International journal of music education* 30: 2, 99–110

Hannan, Michael 2008 'Unruly rules: guidelines for Australian practice-based doctorates in music', in proceedings of 28th international society for music education (ISME) world conference 20–25 July, Bologna, Italy

Maréchal, Garance 2010 'Autoethnography', in Albert J Mills, Gabrielle Durepos & Elden Wiebe (eds) *Encyclopedia of case study research* 2, Thousand Oaks, CA: Sage, 43–5

Mafe, Daniel J & Andrew R Brown 2006 'Emergent matters: reflections on collaborative practice-led research' *Speculation and innovation conference*, April 2005, Brisbane: QUT

Newberry, Darren 2010 'Research training in the creative arts and design', in Michael Biggs and H Kartlsson (eds) *Routledge companion to research in the arts*, London: Routledge, 368–87

OECD Factbook 2006 'Economic, environmental and social statistics' *Research and development* (R&D), at http://puck.sourceoecd.org/ (accessed 29 November 2006)

Polifonia 2007 'Guide to third cycle studies in higher music education' *The 3rd cycle working group* The Netherlands: Association Européenne des Conservatoires, Académies de Musique et Musikhochschulen

Research Assessment Exercise 2008 'Assessing pedagogic research: conclusions and advice', at http://www.rae.ac.uk/aboutus/policies/pedagogic (accessed 29 August 2013)

Rust, Chris, Paul Chamberlain & James Roddis 2000 A practice-centred approach to research in industrial design, paper presented at Design plus Research Conference, Politecnico di Milano, May

Schippers, Huib 2007 'The marriage of art and academia: challenges and opportunities for music research in practice-based environments' *Dutch journal for music theory* 12: 1, 34–40

Stake, Robert 1995 The art of case study research, Thousand Oaks: Sage

Woods, David & Klaus Christoffersen 2001 'Balancing practice-centered research and design', in Michael McNeese and Michael A Vidulich (eds) *Cognitive systems engineering in military aviation domains* Wright-Patterson AFB, OH: Human Systems Information Analysis Centre, 121–36