

Surmounting the Skepticism: Developing a Research-Creation Methodology

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This paper was written to help address the tenuous status of research-creation at the University of Toronto, where I am a Doctor of Musical Arts candidate. There, I devised a “feedback saxophone” system in which I combine the tenor saxophone with various microphones and speakers to encourage and control acoustic feedback. The DMA program at U of T is classified as professional, so the premise of centering my thesis around my feedback saxophone practice was met with some healthy skepticism. This was not because it was viewed as uninteresting, but because creative practice is not typically considered a justifiable form of research in thesis writing.

To therefore bolster research-creation as a legitimate form of scholarly inquiry and to build a model for my own research in music, I aim to answer two questions, insofar as they pertain to my research-creation project: (1) “How is creative practice research?” and (2) “What methods are appropriate for carrying out my creative practice as research?” In answering the first, I draw from the literature to demonstrate how research-creation is a form of knowledge generation that complements conventional modes of investigation. Following this, I examine different categories of research-creation and illustrate them on a music research “compass” to facilitate comparison and understanding. To answer the second question, I discuss two relevant research-creation methodologies and combine them to construct my own “problem-practice-exegesis” approach. I conclude by detailing how I carry out my research using this methodology.

Through this work, I endeavor to provide a practical model for graduate artist-researchers who are interested in integrating their creative practices with thesis writing and to contribute to the validation of research-creation within Canadian graduate music programs and beyond.

Keywords: research-creation, artistic research, methodology, practice-based research, creative practice.

Introduction

The role that creative activity plays within academic institutions is a contested topic,¹ and there is much debate on whether artistic acts may be considered research at all. This issue is compounded in many Canadian graduate programs in music, as performance and composition are often treated as being distinct and separate from research activities. This paper represents my foray into the literature on research-creation² – an endeavor that was made necessary due to the tenuous position of the field at the University of Toronto. There, I devised a “feedback saxophone” system in which I combine the acoustic properties of the tenor saxophone with the peculiarities of various microphones and speakers to encourage and control acoustic feedback. Research-creation projects such as this are not typical at U of T; therefore, the premise of centering my thesis around feedback saxophone was met with some healthy skepticism. This was not because my creative practice was viewed as uninteresting, but because creative practice is not typically considered a justifiable form of research in thesis writing. Considering my participation in a doctoral program in music performance, I naively believed that my creative activities at the university were, *de facto*, research.

Beyond any artistic merits of my feedback saxophone project, it became clear that to properly address the skepticism (as much for myself as the skeptics) and legitimize it as a research endeavor, I needed to answer two fundamental questions: (1) “How is creative practice research?” and (2) “What methods are appropriate for carrying out creative practice as research?” To answer the first question, I first address the topic of research-creation in general, beginning with a summary of common arguments against creative practice as research and then, centering around the work of Henk Borgdorff and Sandeep Bhagwati, I discuss research-creation as a form of knowledge generation that can exist in parallel with conventional modes of inquiry. Following this, I examine various categories of music research set out

1 This was apparent from the varied perspectives and energized discussions presented at events in 2021 such as EPARM and the X-Disciplinary Congress, the latter at which I presented some of this material.

2 Research-creation, artistic research, and practice-based research are all terms for research that integrates artists and art into its methods, processes, outcomes, and knowledge generation. While there are subtle ontological and epistemological differences between each of these terms, they are treated as equal here. I will be using the term research-creation, as that is the federally recognized term in my home country of Canada.

by both Borgdorff and Lyle Skains. I subsequently illustrate these categories on a music research “compass” and discuss how it can be used to facilitate the understanding of, and comparison between, various academic projects that incorporate creative practice. To answer the second question, I examine the research-creation methodologies of Bhagwati and Skains and combine them to construct my “problem-practice-exegesis” approach. I conclude the paper with describing how my research is carried out using this methodology.

Through this work, I endeavor to contribute to the idea that creative practice can serve scholarly ends and be thoroughly integrated with thesis writing. Furthermore, by discussing appropriate methodologies and methods, I intend to provide a practical model that similarly situated graduate students may follow. This is all done with the ambition to encourage more research of this nature to be carried out in graduate performance and composition music programs in Canada and beyond.³

Categorizing Research-Creation

Research v. Creation

Henk Borgdorff’s book *The Conflict of the Faculties*⁴ begins by describing Immanuel Kant’s 1789 pamphlet of the same name,⁵ in which the German philosopher argued against the tiered system of scholarly disciplines. In Kant’s time, those studying at the “lower faculties”, the natural sciences, the humanities, and philosophy, could only be awarded master’s degrees. Those studying at the “higher faculties”, theology, law, and medicine, could be awarded doctorate degrees. Today, over two hundred years later, Kant’s argument against a hierarchical system of research is being echoed in the debate around research-creation. Borgdorff is one of many authors who suggest that we are in need of a similar paradigm shift to elevate the contemporary lowest faculty – research-creation – to a level commensurate with other forms of research.⁶ While there have been many positive developments in this regard, research-creation still has its detractors.

3 For those readers in academic institutions that have more thoroughly accepted artistic research as a valid approach, I hope this paper provides a fresh perspective on the topic.

4 Henk Borgdorff, *The Conflict of the Faculties Perspectives on Artistic Research and Academia* (Leiden, Netherlands: Leiden University Press, 2012).

5 Immanuel Kant and Mary J. Gregor, *The Conflict of the Faculties = Der Streit Der Fakultäten* (New York: Abaris Books, 1979).

6 Borgdorff, *The Conflict of the Faculties*, 26.

The resistance to research-creation comes from two camps: artists in and outside universities who believe that art suffers when it is subjected to the metrics of research, and academics who believe that creative practice cannot contribute to knowledge in a comparable manner to conventional research. This debate is summarized well in John Croft's "Composition Is not Research"⁷ and Ian Pace's rebuttal article, "Composition and Performance Can Be, and Often Have Been, Research."⁸ Croft suggests that carrying out musical composition as research is a category error and therefore not suitable as a form of investigation. Moreover, he believes that the notion of composition as research is "inimical to genuine musical originality,"⁹ in other words, that artistic practice cannot flourish within the scholarly confines of research questions and findings. In fact, research questions help determine whether creative practice meaningfully contributes to the artistic world and can focus an artist's practice towards achievable outcomes, as is often the case in many graduate-level performance and composition programs. Ian Pace, among others,¹⁰ echoes these sentiments. He counters Croft's statements by arguing that composers and performers often ask a great deal of questions in the process of their creative practices, even when working alone, and that they apply answers to these questions in their creative output. Rather than stifling creative practice, discursive research can highlight artistic significance by "verbally articulat[ing] the questions, issues, aims and objectives, and stages of compositional [or performance] activity, to open a window onto the process and offer the potential of use to others."¹¹

In concluding his article, Pace contests that the real issue is not whether creative practice counts as research, but rather how to ensure that the methods and results of research-creation contribute in an equivalent manner to other forms of scholarly investigation.¹² Doubting the scholarly equivalency of research-creation is the line of reasoning among the second

7 John Croft, "Composition is not Research", *Tempo* 69, no. 272 (2015): 6–11.

8 Ian Pace, "Composition And Performance Can Be, And Often Have Been, Research", *Tempo* 70, no. 275 (2016): 60–70.

9 Croft, "Composition", 6.

10 Such as Halina Dunin-Woyseth, "Some Notes on Mode 1 and Mode 2: Adversaries or Dialogue Partners?", in *The Routledge Companion to Artistic Research in the Arts*, ed. Michael Biggs and Henrik Karlsson (New York, NY: Routledge, 2011), 64–81.

11 Pace, "Composition and Performance", 67.

12 Ibid., 69.

camp of detractors.¹³ To address this issue, many scholars have indicated the need to include research-creation in its own category of knowledge generation, in addition to the humanities and sciences, so that it may be more easily accepted as a body of research onto itself. From this perspective, research-creation does not need to contribute in equal ways to conventional research, but rather produce distinct and complementary knowledge.

A Third Pillar of Research

To address the argument of scholarly equivalency for research-creation, composer and scholar Sandeep Bhagwati defines the three major forms of scholarly knowledge generation as follows:

a) Research that formulates and further develops conceptual models of the world, based on data and the histories of ideas. This research paradigm drives the natural sciences as well as large parts of the humanities (philosophy, history, sociology, linguistics, economics, etc.)

b) Research that studies the interaction of such models with the “real world”, based on application and demonstration. This research paradigm drives research in medicine, pharmacology, engineering, education, music therapy, business management, etc.

Artistic Research [research-creation], then, obviously is neither of those – rather, it reveals itself as a third stream of knowledge production:

c) Artistic Research [research-creation] researches the ways and means by which we build (and can build) models of the world.¹⁴

Defining a third category of knowledge has also been suggested by Borgdorff. According to him, such a distinction ensures that research-creation “embodies the promise of a distinctive path in a methodological sense that differentiates artistic research from the more mainstream academic research.”¹⁵ Considering research-creation as a discrete mode of

13 This argument plays out in how music programs are administered. For example, despite research-creation being federally recognized by the Social Sciences and Humanities Research Council in Canada (SSHRC), institutions such as the University of Toronto have funding policies that diminish its viability at the graduate level.

14 Sandeep Bhagwati, “Sounding the Climate we Live in: On Ways and Means of Artistic Research in Music and Sound” (draft paper, The AEC European Platform for Artistic Research in Music EPARM 2021, Online, 18 March 2021).

15 Borgdorff, “Conflict of the Faculties”, 39.

investigation has it uses, but it also must be defined beyond this. Canada's Social Sciences and Humanities Research Council defines research-creation as "an approach to research that combines creative and academic research practices, and supports the development of knowledge and innovation through artistic expression, scholarly investigation, and experimentation. The creation process is situated within the research activity and produces critically informed work in a variety of media (art forms)."¹⁶ Borgdorff provides a more detailed definition:

(1) The investigation should be intended as research. Inadvertent (fortuitous) contributions to knowledge and understanding cannot be regarded as research results... (2) Research involves original contributions – that is, the work should not previously have been carried out by other people, and it should add new insights or knowledge to the existing corpus... (3) The aim is to enhance knowledge and understanding. Works of art contribute as a rule to the artistic universe. That universe encompasses not only the traditional aesthetic sectors; today it also includes areas in which our social, psychological, and moral life is set in motion in other ways – other performative, evocative, and non-discursive ways. We can hence speak of research in the arts only when the practice of art delivers an intended, original contribution to what we know and understand.¹⁷

Common threads among these definitions include new ways of engagement, innovation, and experimentation as well as contributions to knowledge and understanding. Borgdorff's mention of intention is notable when comparing his definition to other institutions'. Neither SSHRC nor the Association Européenne des Conservatoires (AEC), one of Europe's leading research-creation institutions, mention intent.¹⁸ Despite this, Borgdorff is not alone, as R. Lyle Skains has also identified the need for intention

16 Social Sciences and Humanities Research Council, „Definition of Terms“, accessed June 15, 2021, <https://www.sshrc-crsh.gc.ca/funding-financement/programs-programmes/definitions-eng.aspx#a3>.

17 Borgdorff, "Conflict of the Faculties", 42.

18 The Association Européenne des Conservatoires, "Key Concepts for AEC Members Artistic Research An AEC Council "White Paper", 2015", accessed 15 Feb 15 2021, <https://www.aec-music.eu/userfiles/File/Key%20Concepts/White%20Paper%20AR%20-%20Key%20Concepts%20for%20AEC%20Members%20-%20EN.pdf>.

in carrying out this style of research. Skains teaches creative digital writing and science communication while conducting practice-based research. Her article “Creative Practice as Research: Discourse on Methodology” has been invaluable to my understanding of this topic. For her, the intention to carry out creative practice as research comes in the form of a clearly defined research question which “helps to determine the scope of the creative practice” and “provides a framework for examining the creative activity.”¹⁹

Forms of Music Research

Beyond general definitions, it is also necessary to distinguish sub-disciplines to ensure that rigorous standards are developed within research-creation and that a diversity of approaches is embraced by the scholarly community. Søren Kjørup argues that this plurality is imperative for the healthy growth of research-creation as a field and will help prevent gatekeeping from those who believe they have found the “one and only *real* artistic research.”²⁰ Likewise, varied approaches will help prevent the potentially suffocating effects of applying scientific models to artistic practice that some skeptics are concerned about. To facilitate this pluralistic thinking, I discuss the categories of music research that Skains and Borgdorff use in their writing [fig. 1], grouped together based on the categories’ similarities.

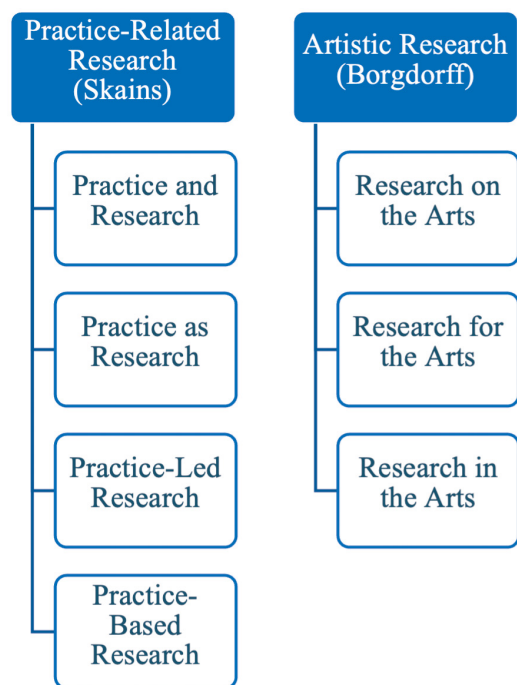
Skains’ first category is practice and research, wherein artists draw from their own creative practice to analyze and criticize others’ work. This relationship could also be inverted to include research-informed practice, such as when musicological and historical research informs present day period performance. Borgdorff’s research on the arts is somewhat less practitioner-focused, in that there is complete separation between the researcher and the object of research. Musicology is an example of this, as creative processes and products are studied but are not part of the results, which are communicated primarily in literary form.

Secondly, Skains discusses practice-as-research, perhaps the most controversial of approaches to research-creation, where the research is

19 R. Lyle Skains, “Creative Practice as Research: Discourse on Methodology”, *Media Practice and Education*, 19, no. 1 (2018): 88.

20 Søren Kjørup, “Pleading for Plurality: Artistic And Other Kinds Of Research”, in *The Routledge Companion to Research in the Arts*, eds. Micael Biggs and Henrik Karlsson (New York: Routledge, 2011), 24.

embodied in only the creative process and products with no accompanying critical exegesis. Unsurprisingly, this approach receives the most skepticism with regards to its suitability for academia. Without communicating a clear methodology or discursive results, it is difficult to distinguish practice-as-research from any other creative activity. To paraphrase Bhagwati, if all practice is research, then none of it is research.²¹ Borgdorff does not include such a category, as he suggests that researchers must contextualize the processes and products of their work to broader scholarly audiences.²²



1. Forms of Research-Creation, as described by Skains and Borgdorff.²³

Next, Skains herself admits that the distinction between practice-led research and other forms of practice-related research can be murky. She says that practice-led research “focuses on the nature of creative practice, leading to new knowledge of operational significance for that practice, in order to advance knowledge about or within practice. The results... may

21 Bhagwati made this comment on several occasions online: at EPARM March 2021 and at a workshop he gave for the TaPIR Lab at the University of Toronto, June 2021.

22 Borgdorff, “Conflict of the Faculties”, 25.

23 Borgdorff, 37–39; Skains, 85–86.

be communicated in a critical exegesis without inclusion of the creative artefact, though the creative practice is an integral part of the research.”²⁴ A book of extended instrumental techniques is a possible example here – creative practice is at the heart of the research, while the final product is a book describing best practices, perhaps with images and audio files used for demonstration, but no explicitly creative product (such as a performance or composition) is necessary to communicate the results. This category bears close resemblance to research for the arts that, according to Borgdorff, “delivers... the tools and the knowledge of materials that are needed during the creative process or in the artistic product.”²⁵

Lastly, Skains suggests that in practice-based-research, the creative artefact itself contributes to knowledge and is accompanied by a critical discussion that contextualizes and demonstrates the significance of the research. Full understanding of the research may only be achieved through these elements working in tandem.²⁶ Borgdorff’s definition of research in the arts aligns with Skains’ category in that it assumes no separation between subject and object nor between the researcher and their practice.²⁷ This is an inherently reflexive approach and seeks to communicate the knowledge embodied in artistic work.

While it is possible to imagine examples of research that would fall under each of these categories, academics and artists from different disciplines will undoubtedly categorize examples in divergent ways. This became clear during a workshop I gave on research-creation: without consensus on which projects fit what approach, the categories failed to provide much clarity. Consequently, I determined that these categories are, in practice, fluid examples on a spectrum of music research approaches. I have illustrated this spectrum on a “music research compass”, with conventional knowledge generation and methods on one end and artistic knowledge generation and methods on the other [fig. 2]. This compass highlights the role that creative practice plays in the research, whether in the methodology, the results, or both. Using this diagram can facilitate the comparison between research-creation projects, as well as between research-creation and

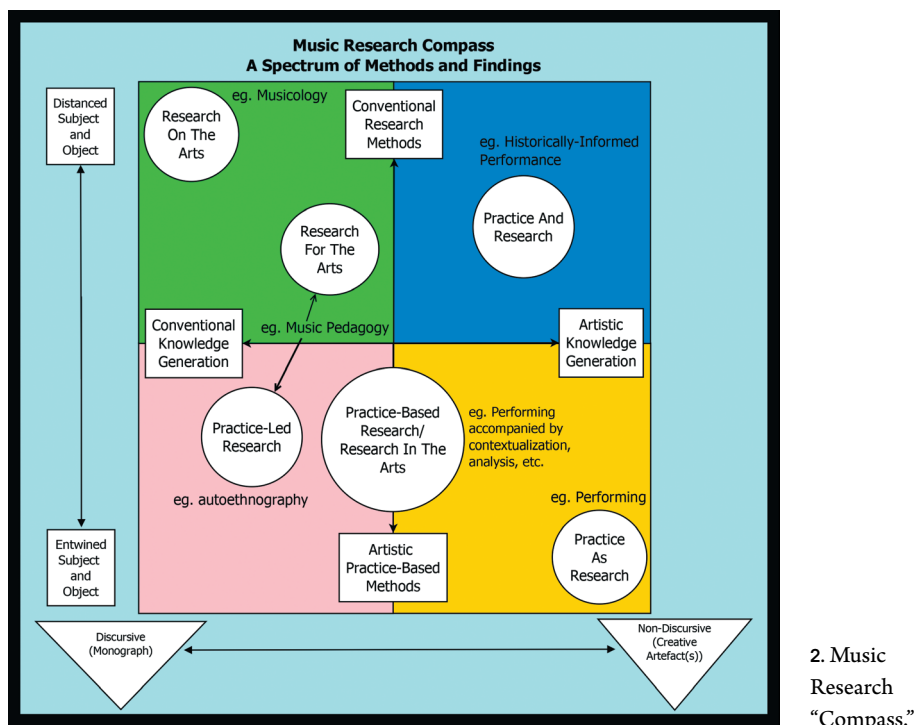
24 Skains, “Creative Practice”, 86.

25 Borgdorff, “Conflict of the Faculties”, 38.

26 Skains, “Creative Practice”, 86.

27 Borgdorff, “Conflict of the Faculties”, 38.

conventional research. For instance, it would be challenging to evaluate a practice-as-research project alongside a practice-led research project if their methods and results incorporate creative practice in widely differing ways. Conversely, identifying projects that are similarly situated on the graph invites comparison.



In the graph, the x-axis represents the type of knowledge generated, from the literal and discursive to the artistic and non-discursive. The findings from either end of this axis would be disseminated in monograph form and creative artefact(s), respectively. The y-axis represents the methods, from the conventional and distanced object of study to the practice-based and intertwined object of study. Similarly, the methods employed would include quantitative and qualitative data collection at one end of the axis, with creative-practice-as-methods on the other. While the examples I have provided are all within music, this chart could be used for any practice-based research.

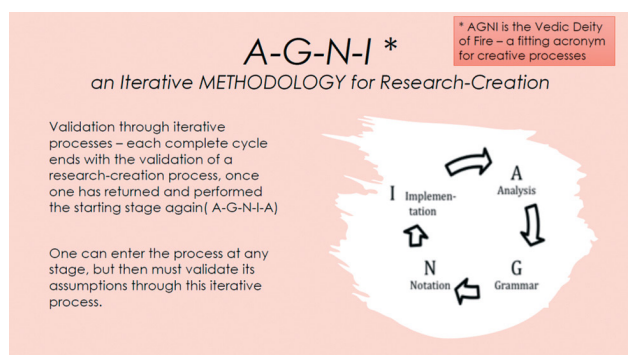
The circles represent the categories of research-creation I just discussed and are placed according to how artistic practice is employed within each one. In the top left corner, there is research on music, where the artistic practice of the researcher plays no role in the study, such as in music history. At the bottom right there is practice-as-research, where creative practice and research are one in the same. Neither the placement of the forms of research-creation, nor the examples given for each, are meant to be immovable. For example, music pedagogy research could find a home in numerous spaces on this chart, depending on the centrality of the researcher's artistic practice. Yet the current discourse suggests that as music research moves from the top left to the bottom right, that is, as it becomes more fully art without any accompanying critical writing, it runs the risk of being labeled unscholarly. The convergent category of practice-based research/research in the arts is perhaps the most suitable model of research-creation for graduate music programs requiring a thesis.

Where does my feedback saxophone practice fit on this graph? The creative processes and products of the practice are accompanied by an ongoing thesis, categorizing it as practice-based research/research in the arts. Having framed the practice in this scholarly fashion, however, does not demonstrate its significance. To pass as good research, borrowing from the definitions I explored earlier, this research-creation project must produce critically informed works that make original contributions to the artistic world and enhance our knowledge and understanding. The proceeding section on methodology demonstrates how this is achieved.

Methodology

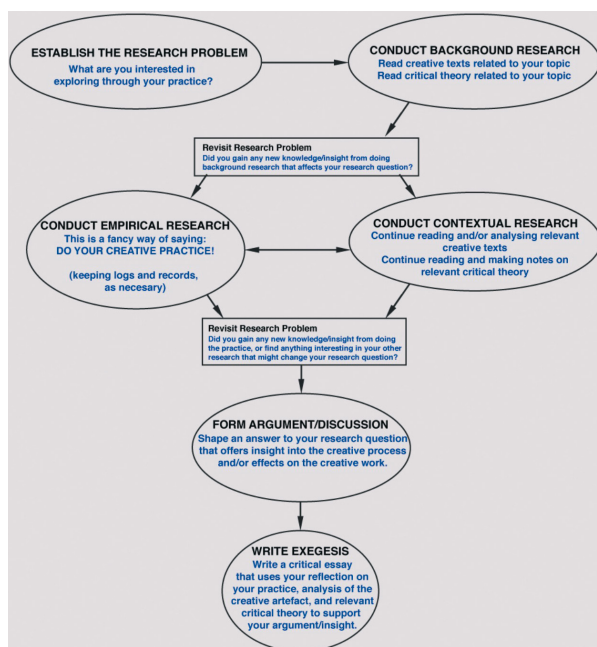
I use the research in the arts/practice-based-research model to combine my creative work with a written exegesis in the form of a multi-media thesis. Placed on the center of the lower half of the music research compass means that my methods lean more heavily on practice, whereas the knowledge I generate is balanced between a discursive thesis and musical performances, recordings, and scores. Establishing this approach is an important step, yet it does little to provide a detailed answer to "What methods are

appropriate for carrying out creative practice within a research context?” As a relatively new research paradigm with a myriad of approaches, developing a methodology for a research-creation project has its difficulties. Without recognized standards, artist-researchers often devise their own methodology to fit their project rather than beginning with a methodology to follow using their practice. Perhaps this is related to the reflexive nature of some forms of research-creation, but it nonetheless is challenging to find applicable methodological models. This problem is compounded when artists do research in a niche area, as I am, meaning there are fewer established methods, sources, and practices to draw on.



3. Bhagwati's AGNI Methodology.²⁸

To address the dearth of methodologies, I have found two models that can be employed in a broad range of research-creation projects: Bhagwati's AGNI methodology and Skains' practice-based research method. The primary feature of AGNI [fig. 3] is its focus on iteration. Many of the authors cited in this paper have commented on the reflexive nature of research-creation. As artists pursue research on, in, and through their crafts, new insights and new questions regarding their research topic are often revealed. Bhagwati addresses this reflexive nature by suggesting that iteration is not only a primary facet of research-creation but also a fundamental part of scientific inquiry. "[I]f we accept iterative methodology as the fundamental gesture of research, the details, rationales, supporting methodologies and artistic approaches employed during such a process can be



4. Skains' practice-based-research method.³⁰

extremely varied and, most importantly, come from different intellectual and epistemological traditions – and yet can all be validated through the same iterative gesture.”²⁹

Skains' practice-based research method [fig. 4] is ideal for integrating creative practice with discursive writing. Her approach to research-creation incorporates iteration and ultimately ends in exegesis. Her methodology leads with a question or problem, which is in line with Borgdorff's definition of research in the arts and is followed by background research on the topic. The iterative, cyclical process occurs in the middle, whereby the researcher updates their question/problem as contextual and empirical (practice-based) research is carried out. While Bhagwati's model may be more broadly applicable, perhaps for those artist-researchers with an ongoing creative project wanting to do research with/on, Skains' approach is directly related to established models of inquiry, such as the scientific method, and is compatible with graduate programs that require a thesis accompany

²⁹ Bhagwati, “Sounding”, 10 (a).

³⁰ Lyle Skains, “PBR Method”, *Creative Practice as Research: Discourse on Methodology*, accessed July 5, 2021, <https://scalar.usc.edu/works/creative-practice-research/media/pbr-method>.

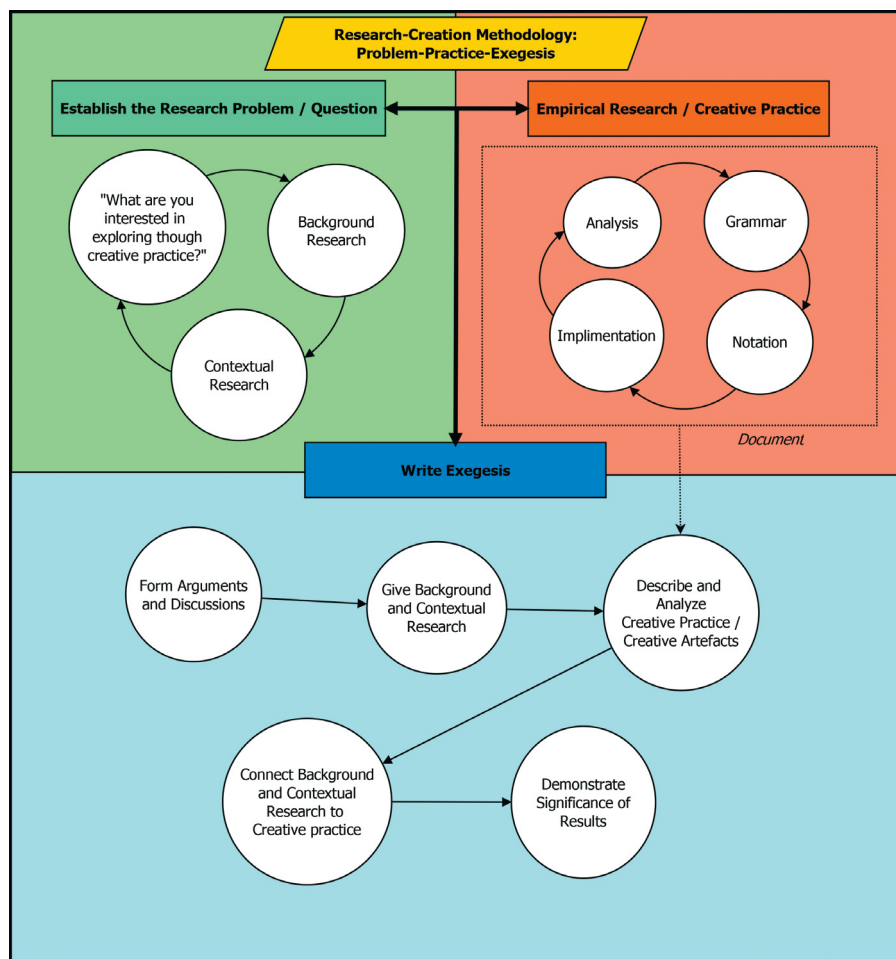
creative activity. To take advantage of both approaches, I have combined these methodologies to create a model for the thesis-centered research-creation that I am engaged in, the “problem-practice-exegesis” methodology [fig. 5]. It is conceivable that in an institution where research-creation is more common, the practice would itself dictate the methodology. In my case, however, I felt my creative practice had to be legitimized as scholarly activity, hence a methodology that incorporates historical and contemporary contextualization as well as critical analysis and reflection.

Establishing the Research Problem

During my first semester as a DMA student, I improvised a preliminary version of my first feedback saxophone piece. To my colleagues and I, this was a novel approach to saxophone performance, and it quickly overshadowed other potential avenues of research. Answering the question “What are you interested in exploring through your practice?” helped determine my exact topic. I was interested in the saxophone and technology, but I needed to narrow to a specific subject, so I began by exploring areas such as interactive media, performer-controlled media, live electronics, and analogue media. This background research was conducted while I developed my artistic material and during courses where I was writing papers and giving presentations, whether on feedback saxophone or related topics. I eventually landed on the microphone as the most important piece of technology in my creative practice, after which my contextual research led me to discover practices of microphone innovation in a wide variety of musical settings. At this point, the aim of my research was clear: I endeavored to expand the expressive capabilities of the saxophone through employing the microphone as a feedback device. Through demonstrating the how feedback saxophone performance practice could be standardized and expanded, I could accomplish this.

Background and contextual research are not often considered part of methodology, yet these steps undoubtedly inform research questions. This stage of the methodology provides the setting for which the creative practice may be understood: its historical precedent; its relation to creative

tradition(s) and trends; and the degree to which it innovates. Describing how the microphone changed music performance practice in the early twentieth century demonstrates the historical precedence for my research, while examining artists who employed feedback as a musical device contextualizes my claims of novelty and development of the practice. Like many artist-researchers, these topics and perspectives were not obvious to me at the onset of my program, and as I learned more, I updated my questions and methods. For instance, I had not discovered any feedback saxophone artists until my second year of studies, despite having done innumerable searches in academic journals, dissertation repositories, and popular search engines. That changed after I discovered the feedback saxophone work of John



5. Research-Creation Methodology: Problem-Practice-Exegesis.

Butcher, whose name casually came up in conversation with a staff member at the university,³¹ greatly influencing the trajectory of my research.³² Although establishing research problems through background and contextual research is not uncommon, addressing the reflexivity of this process is constructive. As many researchers can relate to this process, it emphasizes the legitimacy of a systematic creative practice, as well as the iterative nature of scholarly inquiry itself.

Empirical Research / Creative Practice

This stage of my methodology incorporates AGNI – analysis, grammar, notation, implementation. According to Bhagwati, this process can begin at any point in the cycle. Moreover, what constitutes each step of the cycle will vary depending on the project. I have attempted to give general guidelines regarding my research framework thus far, but concrete examples from my research demonstrate how AGNI may be employed.

I begin with analyzing (A) existing feedback saxophone practice to identify foundational sonic gestures with which I may improvise. This is the most informal method and could be considered practice-informed analysis, as I draw on my past electroacoustic experience and knowledge of my feedback saxophone system to find accessible starting points. The following step is grammar (G), where I develop musical vocabulary through improvisation. This involves an interplay between improvisation and composition in what Richard Dudas calls “comprovisation.”³³ Dudas states that there are “two basic species of composition-improvisation relationships intrinsic in working with electronic and computer music: (1) composing an “instrument” that can be improvised upon in performance, and (2) improvising with tools in order to create pre-compositional material.”³⁴ In this sense, I experiment with various equipment and settings to “compose” my instrument – my feedback saxophone system – and subsequently develop musical grammar, or the pre-compositional material, improvising with this system.

31 Thanks to Ely Lyonblum.

32 The feedback work of free-jazz saxophonist John Butcher is a primary case study in my thesis and an ongoing source of inspiration.

33 Richard Dudas, “Comprovisation”: The Various Facets of Composed Improvisation within Interactive Performance Systems”, *Leonardo Music Journal* 20 (2010): 29–31.

34 Dudas, “Comprovisation”, 29.

Next, select grammar are notated (N) and are organized as musical sketches [fig. 6] that transform into structured improvisations, which I perform and modify over time. The preliminary sketch notation is made in shorthand, so that I may recall successful gestures and structures I encountered in previous improvisations. Although this is useful for my own practice, it is inadequate if my results are to be applied by others. The improvisation is then slowly organized and developed into a composition, in this case an etude for feedback saxophone, meant to introduce the performer and audience to discreet aspects of my system. Next, the composition is formally notated in scoring software in a manner that conveys the complexity of the required musical gestures, while also following the conventions of contemporary saxophone writing [fig. 7]. The notation subsequently becomes part of a performance score, which includes a front matter containing a notation legend as well as interpretation and performance instructions.

- up pulses in time on b-a

- play simple A[^] stuff

- introduce g + ba + harmonize

implying I

- longer to + do pitch bends → G articulation

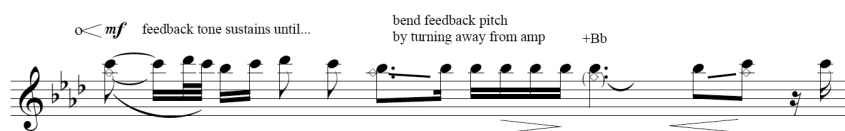
- set to A[^] E F^o F[#]

improvise F[#] B E ↔ A[^]

F[#]7 #11 B[#]9 #11 E[#]7 #11 A[^]6

6. Form sketch of Feedback Saxophone Etude No. 2.

As a performer-composer, the implementation (I) is complete when the score is finished and when the performance has been recorded in audio-visual formats. A composition and performance, however, do not provide comprehensive results – the empirical research process must begin anew for deeper answers. Accordingly, I critically analyze (A) the completed etude and ask, “how can this be expanded or improved?” The results of this inquiry are applied to develop grammar (G) for another piece, and so on (N, I, A, etc.). I have completed three feedback saxophone etudes that provide findings on how the practice can be systematized and expanded. Whereas the AGNI methodology can be widely applied to research-creation projects, I have chosen methods that suit my musical expertise. That said, this specific configuration of AGNI could also be employed in research on/in new electronic or electroacoustic instruments, new acoustic instruments, or newly discovered acoustic instrumental technique.



7. Sample notation from Feedback Saxophone Etude No. 2.

Documentation

The importance of documenting this iterative process should not be understated. For most artists, producing clear and thorough documentation is not necessary to convey the value of their work, as the final creative artefact is the goal. For research-creation, however, the project’s processes, iterations, failures, and successes must be documented to fully communicate the research, to allow for critical reflection, and to permit its results (whether successes or shortcomings)³⁵ to be employed by others. This is especially relevant to research involving innovations in music performance technology, as I am doing. With rapidly changing technology, many new instruments are rarely played by more than a handful of people, exacerbating the challenge of disseminating such research.³⁶ Furthermore,

35 Mistakes or unintended results in creative activity can often be just as inspiring as intentional products.

36 Andrew P. McPherson and Youngmoo E. Kim, “The Problem of the Second Performer: Building a Community Around an Augmented Piano”, *Computer Music Journal* 36, no. 4 (2012): 10–27.

electroacoustic music often breaks the link between performer gesture and sonic result, which reduces the effectiveness of audio-visual recordings as reliable sources for critical analysis.

All these factors highlight the need for systematic documentation in research-creation. In my thesis, I include performances of the completed feedback saxophone etudes³⁷ and as well as various iterations of my notation system. I also incorporate portions of my practice journal which documents discoveries, physical challenges, equipment settings and choices, and more. Documenting my creative practice as described adds to the rigor of the project and provides access to the processes of the research that otherwise would not be available.

Exegesis

For success in research-creation, Henk Borgdorff suggests that “the researcher is obligated to the research community to situate each study in a broader research context and to elucidate both the process and the outcome in accordance with customary standards.”³⁸ Therefore, in my thesis I examine the broader contexts of my feedback saxophone practice, employ the various forms of documentation I have discussed, and connect the literal dots (circles) as illustrated in my problem-practice-exegesis methodology to fully communicate my research and its results. The exegesis remains a fundamental product of scholarly research and should be part of most, if not all, research-creation projects. The increasing occurrence of monographs embedded with multimedia can only signal the importance of non-discursive forms of communication and is an encouraging development for those artist-scholars looking for a more holistic medium through which to present their work.

Conclusion

I had not encountered the concept of research-creation until I was doing my doctorate, which should give some indication as to its importance in post-secondary music education in Canada. While it certainly should be argued that not all musical acts constitute research, creative practice can

37 You can see performances of my feedback saxophone work by searching “greg thesquare” on YouTube.

38 Borgdorff, “Conflict of the Faculties”, 25.

contribute to our collective knowledge as a valid form of scholarly inquiry. Graduate artist-scholars are uniquely suited to carry out this type of research, yet the lack of institutional support for, and/or knowledge of, appropriate models of research-creation encourage such graduate students to carry out historical, theoretical, or musicological research instead. While initially this may not appear problematic, composition and performance graduate students often never write a thesis until their doctorate, if at all, and are consequently faced with the task of producing writing that competes with their research stream colleagues. Integrating research-creation into more music programs would therefore allow graduate artist-scholars to produce rigorous, legitimate findings that reflect their distinct way of being in the world that complements, rather than compromises, other modes of academic investigation. Furthermore, incorporating research-creation into graduate music programs would add to the diversity of research produced at universities and deepen the discourse around knowledge generation. Despite worries that the research-creation landscape is shifting towards the contested practice-as-research model, addressing the epistemic and ontological issues within this approach is a productive exercise and helps to better define the field.

I was somewhat unreceptive of the skepticism that was levied at research-creation in the early days of my program. This constructive criticism, which is a vital facet of scholarly integrity, obligated me to answer two fundamental questions: (1) “How is creative practice research”? and (2) “What methods are appropriate for carrying out creative practice as research”? In answering these questions, I presented research-creation as a form of scholarly inquiry on a spectrum of approaches that can accompany other modes of knowledge generation. Defining this third type of knowledge laid the foundation for my creative practice as research. To carry out, contextualize, and demonstrate the significance of my creative process and products, I developed the “problem-practice-exegesis” methodology that combines artistic practice with critical exegesis. Using the AGNI method within my approach, I provided a model of how improvisation, composition, and performance can be employed systematically in research-creation, especially as it pertains to new electroacoustic instrumental practice.

I am grateful for the high scholarly standards that the skepticism I encountered represented and for the wonderfully encouraging advisory team around me.³⁹ These diametrically supporting forces allowed me to enter this burgeoning field of scholarship and catalyzed the integration of my research topic with my creative practice, without which I would not be pursuing the exciting academic and artistic path I am on today.

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39 My supervisor is Aiyun Huang; my advisors are Eliot Britton and Wallace Halladay.

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Santrauka

Nugalėti skepticizmą: tyriminio vystymo metodologijos link

Gregas Bruce

Reikšminiai žodžiai: tyriminis vystymas, meninis tyrimas, metodologija, praktinis tyrimas, kūrybinė praktika.

Straipsnyje aptariama tyriminio vystymo idėja. Toronto universitete, kuriame studijuojau muzikos meno doktorantūrą, ši tema menkai išgvildenta. Čia esu sukūręs „fonuojančio saksofono“ sistemą, kurioje naudoju įvairiais mikrofonais įgarsintą tenorinį saksofoną akustinio grįžtamojo ryšio reiškiniui sukelti ir kontroliuoti. Toronto universiteto DMA programa klasifikuojama kaip „profesionali“, tad mano sumanymas grįsti disertaciją saksofonu valdomu grįžtamuju ryšiu buvo sutiktas gana skeptiškai. Taip nutiko ne todėl, kad sistema pasirodė neįdomi, o todėl, kad kūrybinė praktika disertacijos tyrimo veikloje laikoma netikslinga.

Todėl siekdamas įtvirtinti savo tyriminio vystymo projektą kaip teisėtą akademinio tyrimo formą ir drauge norėdamas sukurti originalų muzikos tyrimo modelį iškėliau du tyrimui svarbius klausimus: 1) kada kūrybinė praktika tampa tyrimu? ir 2) kokie turėtų būti kūrybinės praktikos kaip tyrimo dalies metodai? Atsakydamas į pirmąjį klausimą ir remdamasis atitinkama literatūra demonstruoju, jog tyrimo vystymas yra žinių generavimo forma, papildanti įprastinius akademinio tyrimo būdus. Atsakydamas į antrąjį klausimą aptariu dvi tyrimui aktualias metodologijas ir lygindamas jas tarpusavyje konstruoju originalią „problemos–praktikos–egzegezės“ prieigą. Straipsnį užbaigiu išsamiai aptardamas, kaip ši metodologija taikoma mano tyrime.

Šiuo tekstu siekiu apibūdinti praktinį modelį, kuris meniniu tyrimu užsiimančioms studentams padėtų disertacijose integruoti jų praktinę veiklą ir įteisinti tyriminio vystymo idėją muzikos edukacijos programoje tiek Kanados universitetuose, tiek kitur.